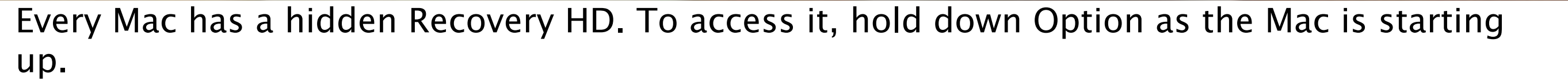


# OS X Mountain Lion Technical Training

[shah@mac.com](mailto:shah@mac.com)

# I. Installation

# I.I Recovery HD







Click Recovery HD. (You can password protect this by using a firmware password.)



Restore From Time Machine – allows you to restore from your backup.

Reinstall OS X – do online install of OS X.

Get Help Online – allows you to search the internet.

Disk Utility – allows you to scan your disks.



# OS X Mountain Lion

To set up the installation of OS X 10.8 Mountain Lion, click Continue.



Continue

Click Reinstall OS X and click Continue.





This requires a fast network connection. Click Continue.



# OS X Mountain Lion

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A copy of the License will be saved on your system and can be found through  
About This Mac after installation. It is also posted at <http://www.apple.com/legal/ula>



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Agree

Click Agree.





I have read and agree to the terms of the software license agreement.

Disagree

Agree



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A copy of the License will be saved on your system and can be found through  
About This Mac after installation. It is also posted at <http://www.apple.com/legal/ula>



Disagree



Agree

Click Agree.



# OS X Mountain Lion

OS X will be installed on the disk "Macintosh HD".



Recovery HD

200 MB total • 135.5 MB free



Macintosh HD

219.25 GB total • 200.3 GB free



Back



Install

You are now ready to install but we won't do it now. You will need a fast network connection because the file is 4GB in size.

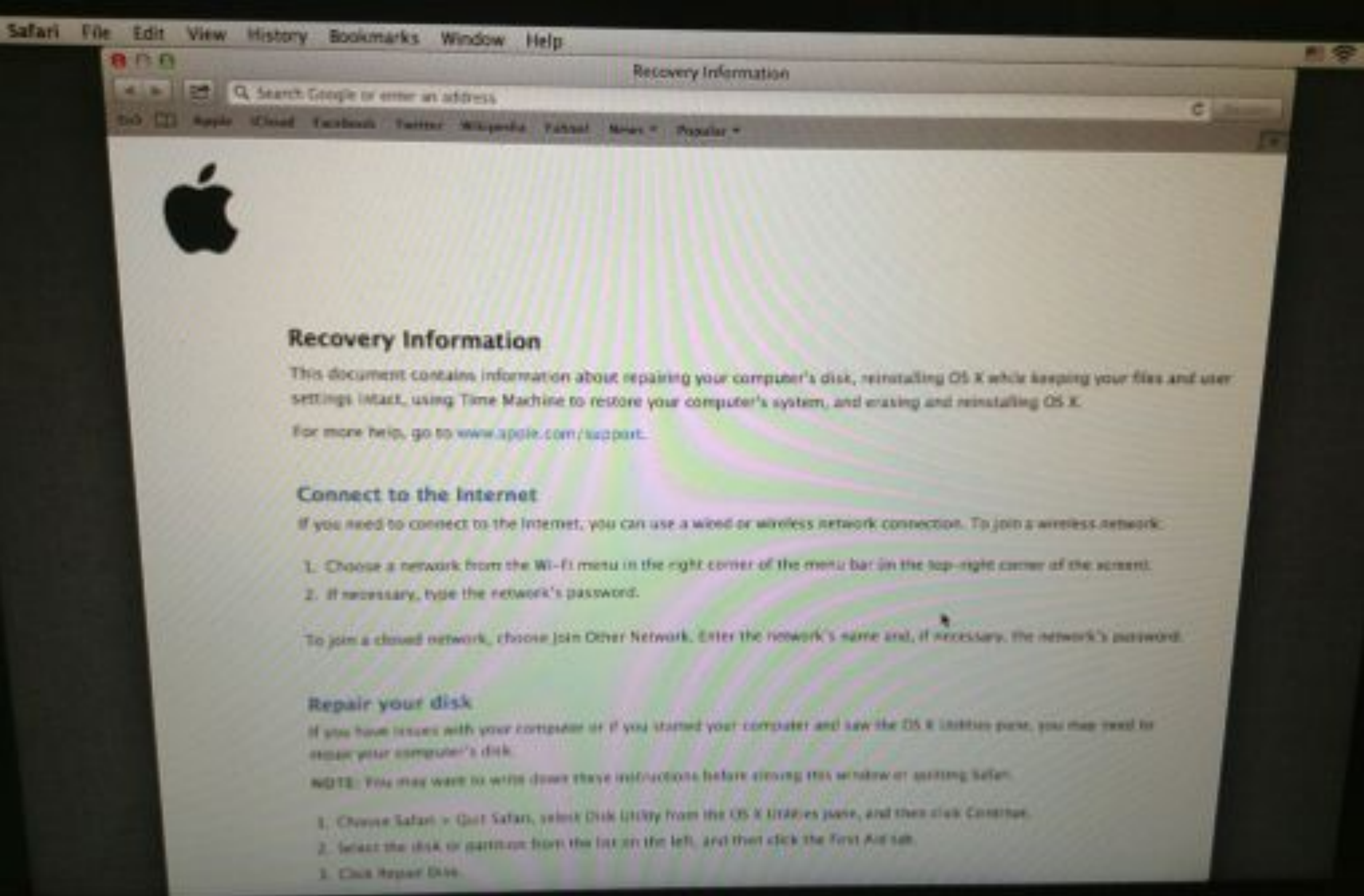


Quit the Installer.





Click Get Help Online.



You can use the browser to search for solutions on the internet. Quit the browser.



# OS X Utilities



## Restore From Time Machine Backup

You have a backup of your system that you want to restore.



## Reinstall OS X

Reinstall a new copy of OS X.



## Get Help Online

Browse the Apple Support website to find help for your Mac.

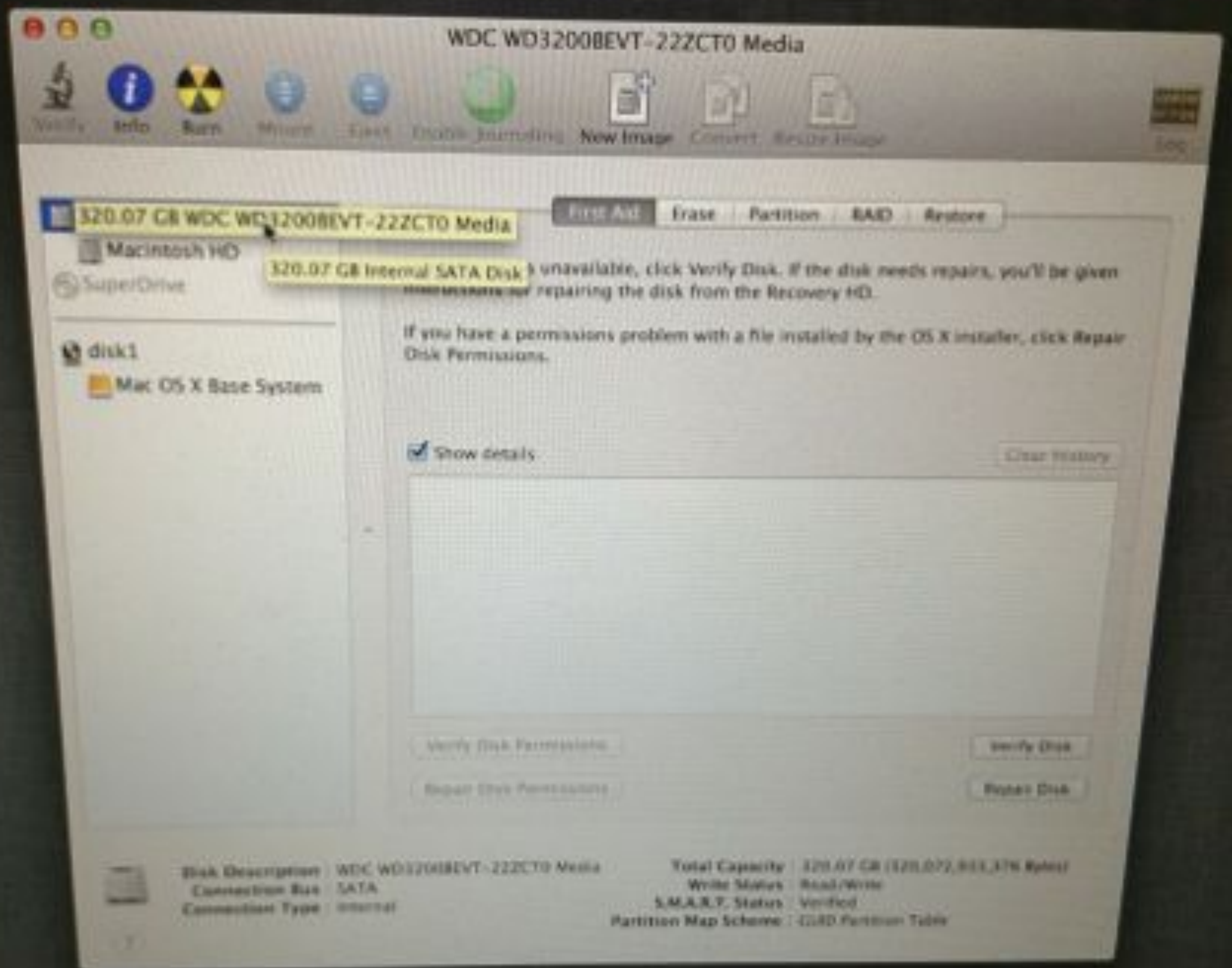


## Disk Utility

Repair or erase a disk using Disk Utility.

Continue

Click Disk Utility.



This allows you to check your hard disk for issues. Quit Disk Utility.

# 1.2 Utilities Menu

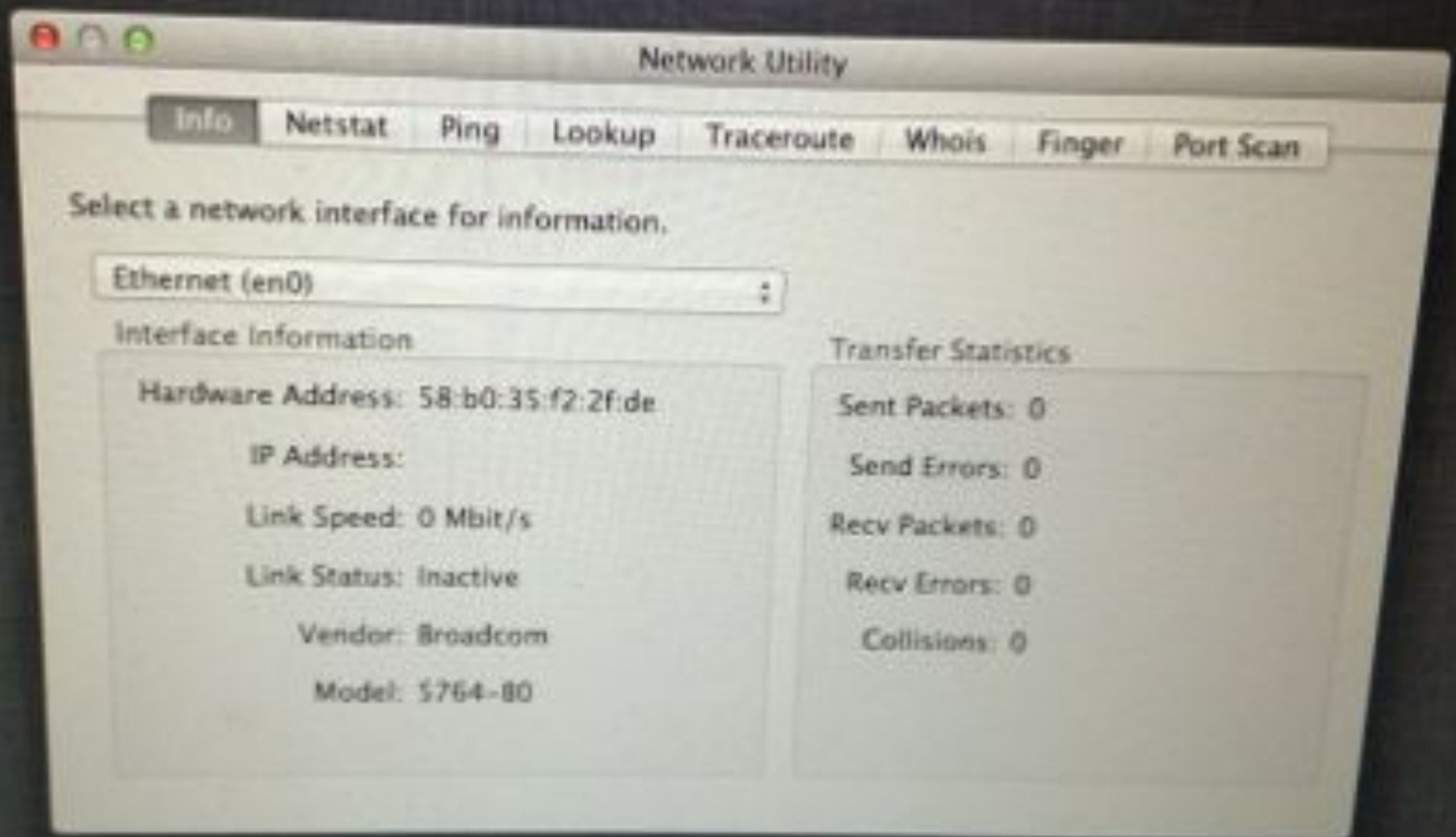




Click the Utilities menu.

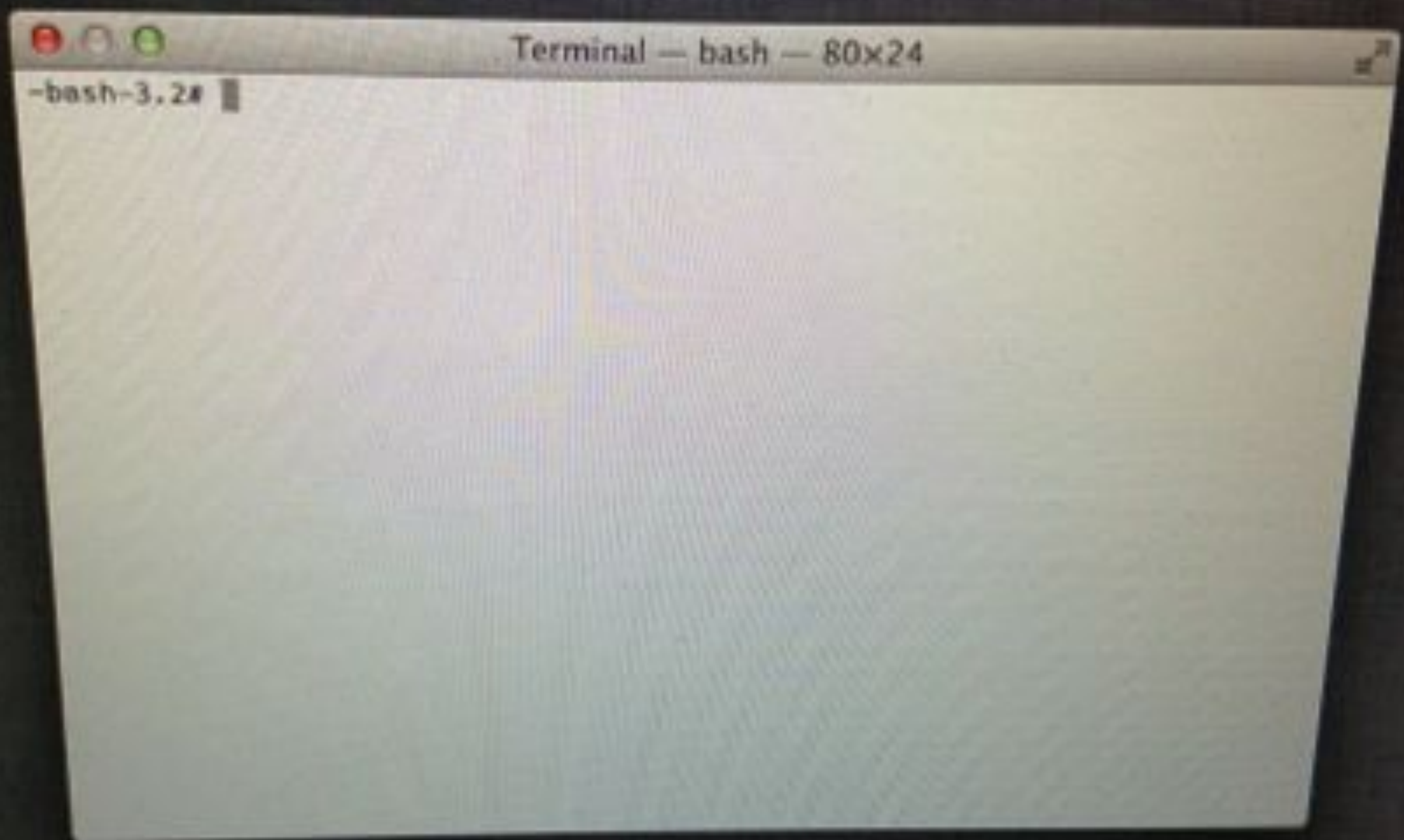


Firmware Password Utility – Disable all keyboard startup shortcuts and displays password when you hold down the option key on startup

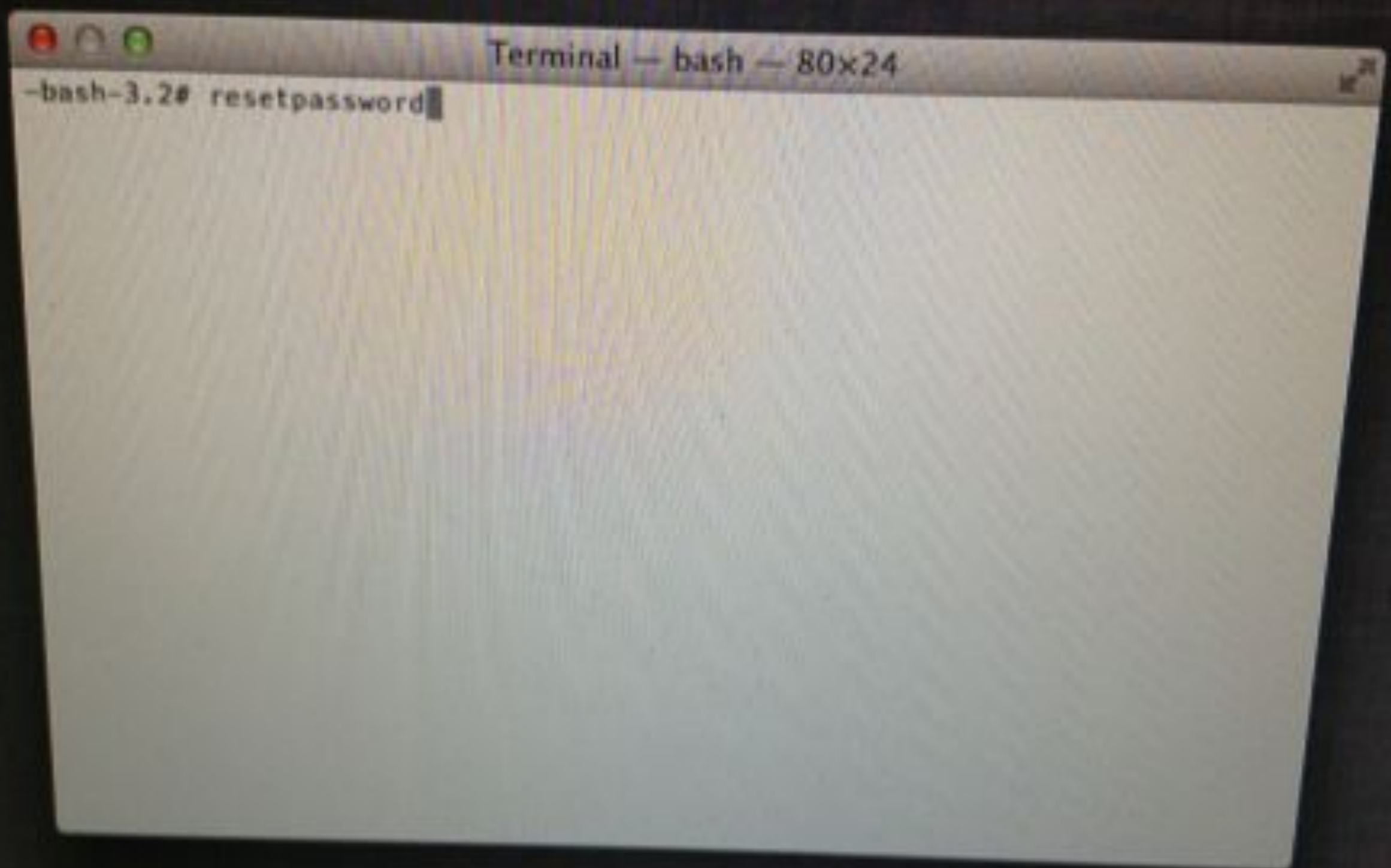


Network Utility – Check Network connection





Terminal – Command line interface



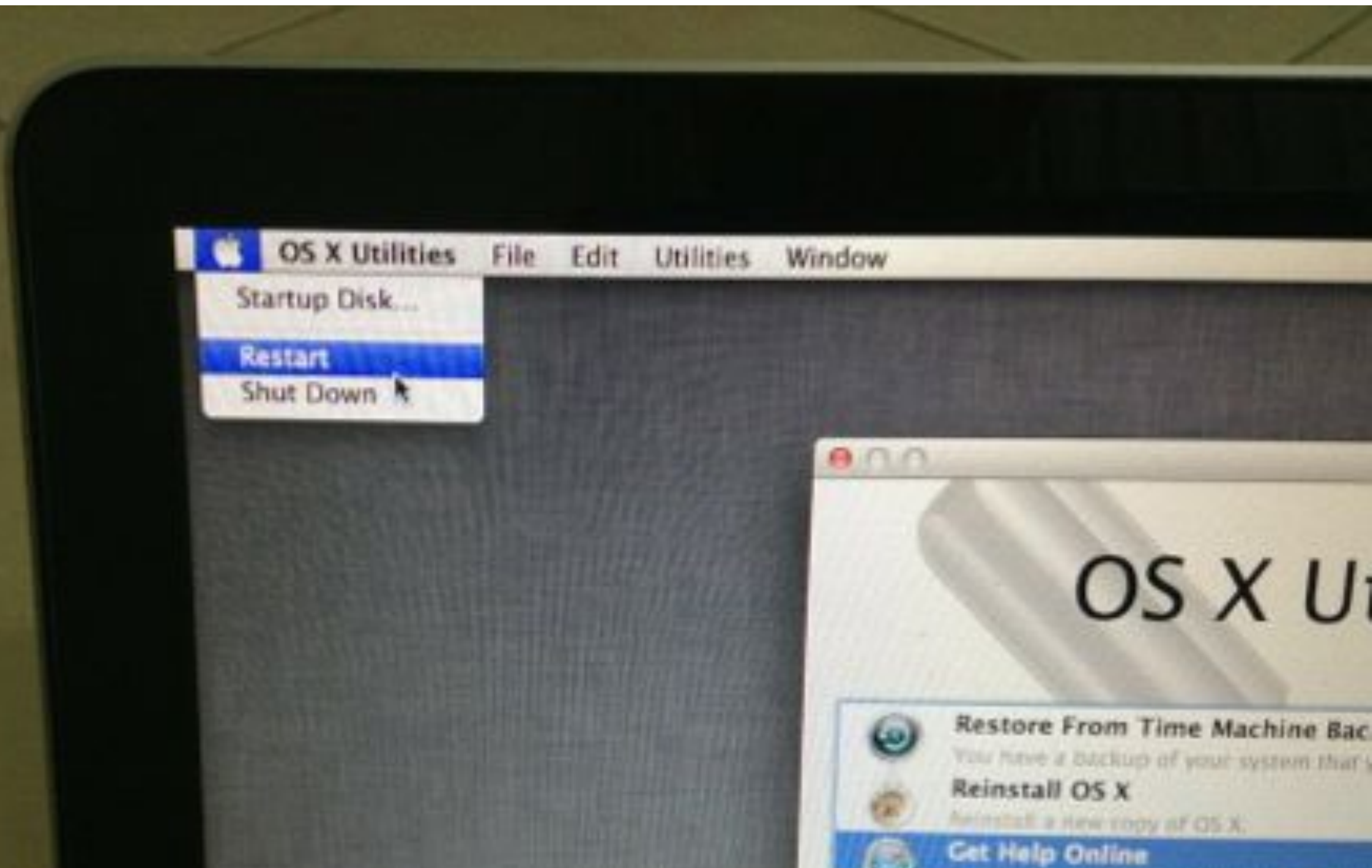
Type resetpassword and press return.



You can reset the password for any user here.



# 1.3 Apple Menu

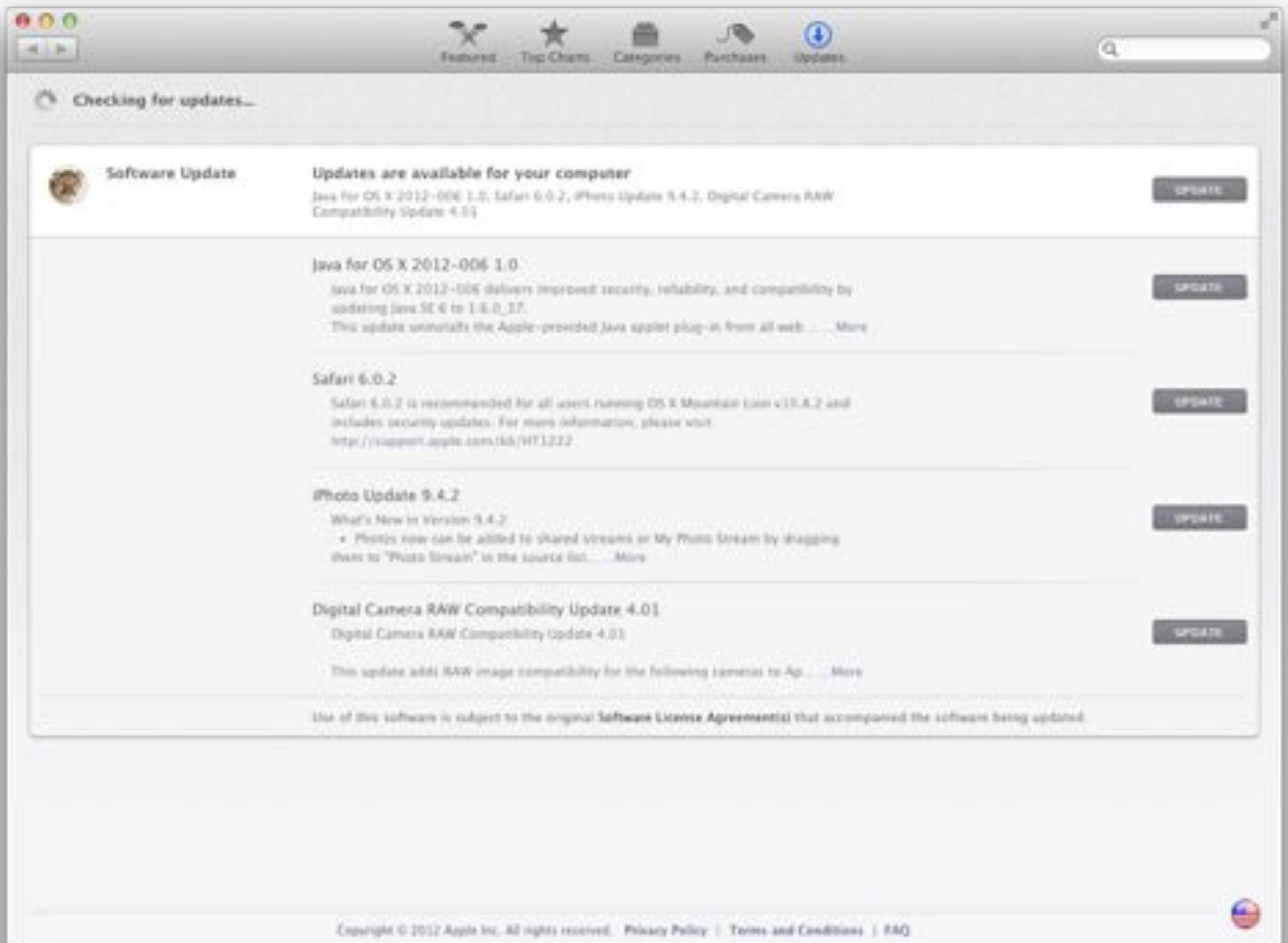


You can choose which disk to start your Mac up from, Restart or Shut Down.

# 1.4 Software Update



To update your Mac Software, choose Software Update... from the Apple menu.



Click Update to update your Mac software.

# Appendix: OS X Mountain Lion Setup



# Welcome

In just a few steps, you can register and set up your Mac.



- Macau SAR China
- Macedonia
- Madagascar
- Malawi
- Malaysia**
- Maldives
- Mali
- Malta

☒ Show All



Back



Continue

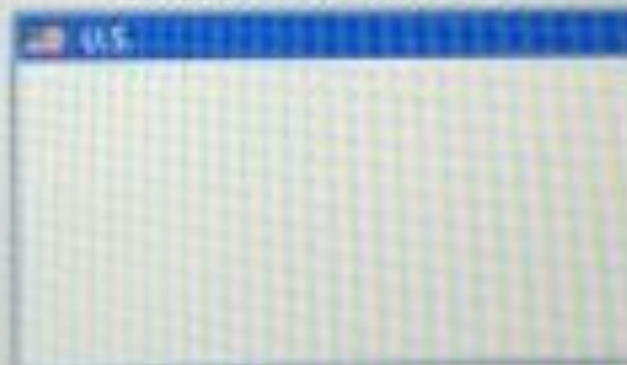
Do you need to hear instructions for setting up your Mac?  
To learn how to use VoiceOver to set up your computer, press the Escape key now.

Choose your country and click Continue.

# Select Your Keyboard



Choose a keyboard layout.



☐ Show All



Back



Continue

Click Continue.

# Transfer Information to This Mac

If you have important information on another Mac or Windows PC, you can transfer it to this Mac. You can also transfer data from a Time Machine backup or another startup disk.



How do you want to transfer your information?

From Another Mac  
From a Windows PC  
From Another Disk  
**Not Now**

You can transfer information later using  
Migration Assistant



Back



Continue

Click Not Now. Click Continue.

# Enable Location Services

Location Services allows apps to gather and use data indicating your approximate location. [Learn more.](#)



☐ Enable Location Services on this Mac



Back



Continue

Click Continue.



En



Are you sure you don't want to use  
Location Services?

Some features, such as Find My Mac, won't be  
available until you turn on Location Services.

Use Location Services

Don't Use



☐ Enable Location Services on this Mac



Back



Continue

Click Don't Use.

# Apple ID

Your Apple ID is used to set up the iTunes Store, the Mac App Store, iCloud, and more on your Mac. [Learn more.](#)



[Want to use different Apple IDs for iCloud and iTunes?](#)

[Forgot Apple ID or Password?](#)



Create a Free Apple ID



Back



Continue



Skip

Click Skip.



Are you sure you want to skip signing in with an Apple ID?

An Apple ID is used to automatically set up the iTunes Store, App Store, iCloud, and more.

[Forgot Apple ID?](#)

[Forgot iCloud password?](#)

Don't Skip

Skip



Apple ID

Password

[Want to use different Apple IDs for iCloud and iTunes?](#)

[Forgot Apple ID or Password?](#)



Create a Free Apple ID



Back



Continue



Skip

Click Skip.



# Terms and Conditions

To continue installing the software you must agree to the terms of the software license agreement.

## IMPORTANT

Use of your Mac computer, the OS X software and related services is subject to these Terms and Conditions. Please read them carefully.

### A. OS X Software License Agreement

By clicking "Agree," you are agreeing to be bound by these Apple and third party terms. >

A copy of the License is saved on your system and can be found through  
About this Mac. It is also posted at <http://www.apple.com/legal/ula>



Back



Continue

Click Continue.





I have read and agree to the OS X  
Software License Agreement.

To continue

Cancel

Agree

are license

### IMPORTANT

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About This Mac. It is also posted at <http://www.apple.com/legal/usa>



Back



Continue

Click Agree.

# Create Your Computer Account

Enter a name and password to create your computer account. You need this password to administer your computer, change settings, and install software.

Full Name:



Account Name:

This will be used as the name for your home folder.

Password:

☐ Allow my Apple ID to reset this user's password

☒ Require password when logging in

Password Hint:

This hint will be visible to anyone who uses your Mac.



Back



Continue

Enter the administrator information and click Continue.

# Select Your Time Zone

To select a time zone, click the map near your location and choose a city from the Closest City menu.  
You can also have the time zone change automatically, if possible, based on your current location.

☐ Set time zone automatically using current location



Time Zone: Malaysia Time

Closest City: Kuala Lumpur - Malaysia



Back



Continue

Choose Kuala Lumpur and click Continue.



# Register

Register this device to your Apple ID to stay up to date on product information and get faster access to support.

Town or City

County, State, Province, or Region

Email address



Keep me up to date with Apple news, software updates, and the latest information on products and services.



Back



Continue



Skip

Click Skip.



Are you sure you don't want to register?

Registering this device with your Apple ID will help you stay up to date on product information and get faster access to support.

Go Back

Skip

Register this device to your Apple ID to stay up to date on product information and get faster access to support.

Town or City

County, State, Province, or Region

Email address

☐ Keep me up to date with Apple news, software updates, and the latest information on products and services.



Back



Continue



Skip

Click Skip.

# Thank You

Your Mac is set up and ready to use.



Start using your Mac.

Click Start using your Mac.

# Appendix: Configure Mouse or Trackpad





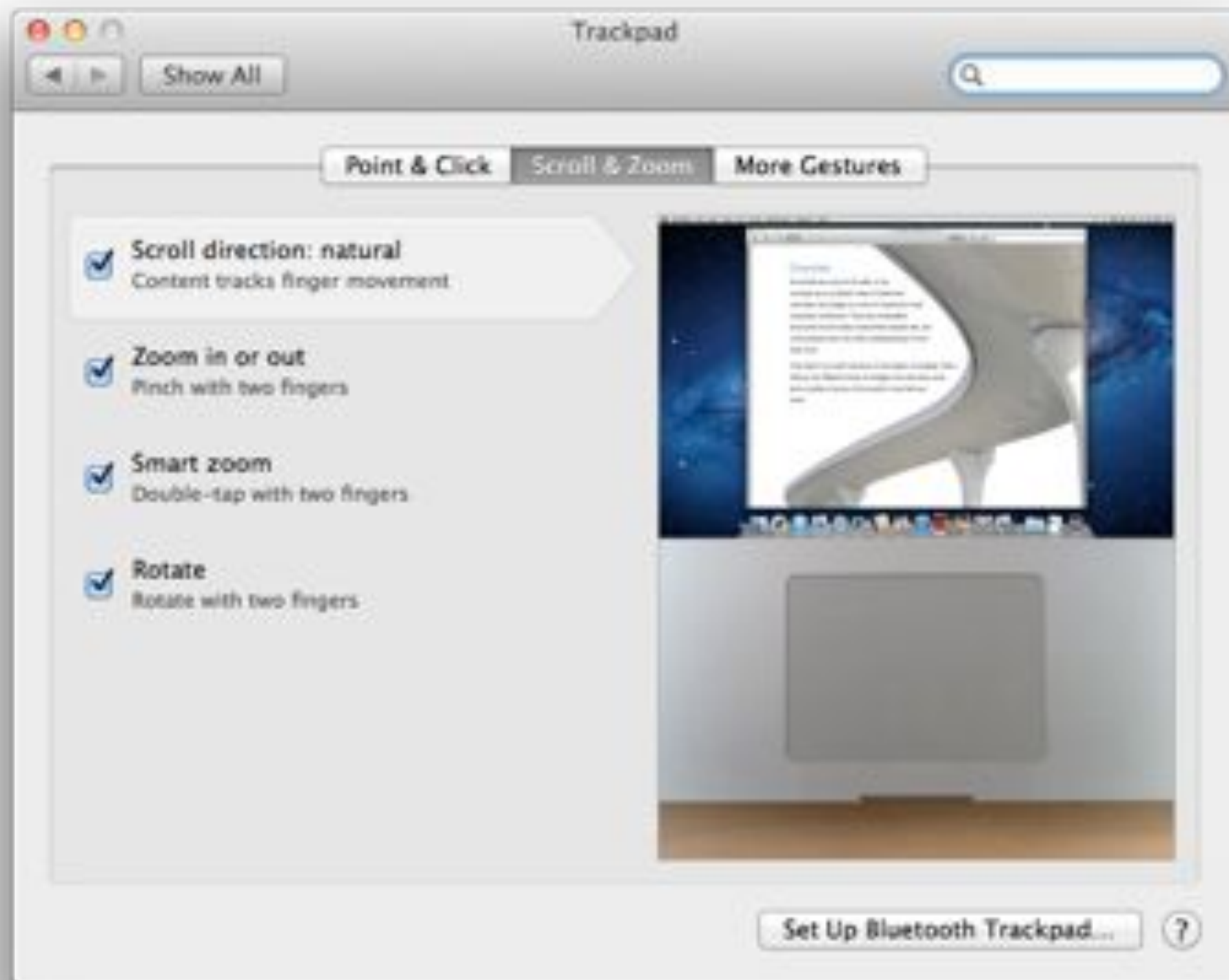
Choose System Preferences... from the Apple menu.



Choose Mouse or Trackpad.



Configure the mouse as shown.



Review the Scroll & Zoom settings. You may wish to change the Scroll direction.





Click Point & Click. Change Tracking Speed to fast and make sure Tap to click is set. Tick Three finger drag.



Click More Gestures. Tick App Exposé. Close System Preferences when done by clicking the Red button.

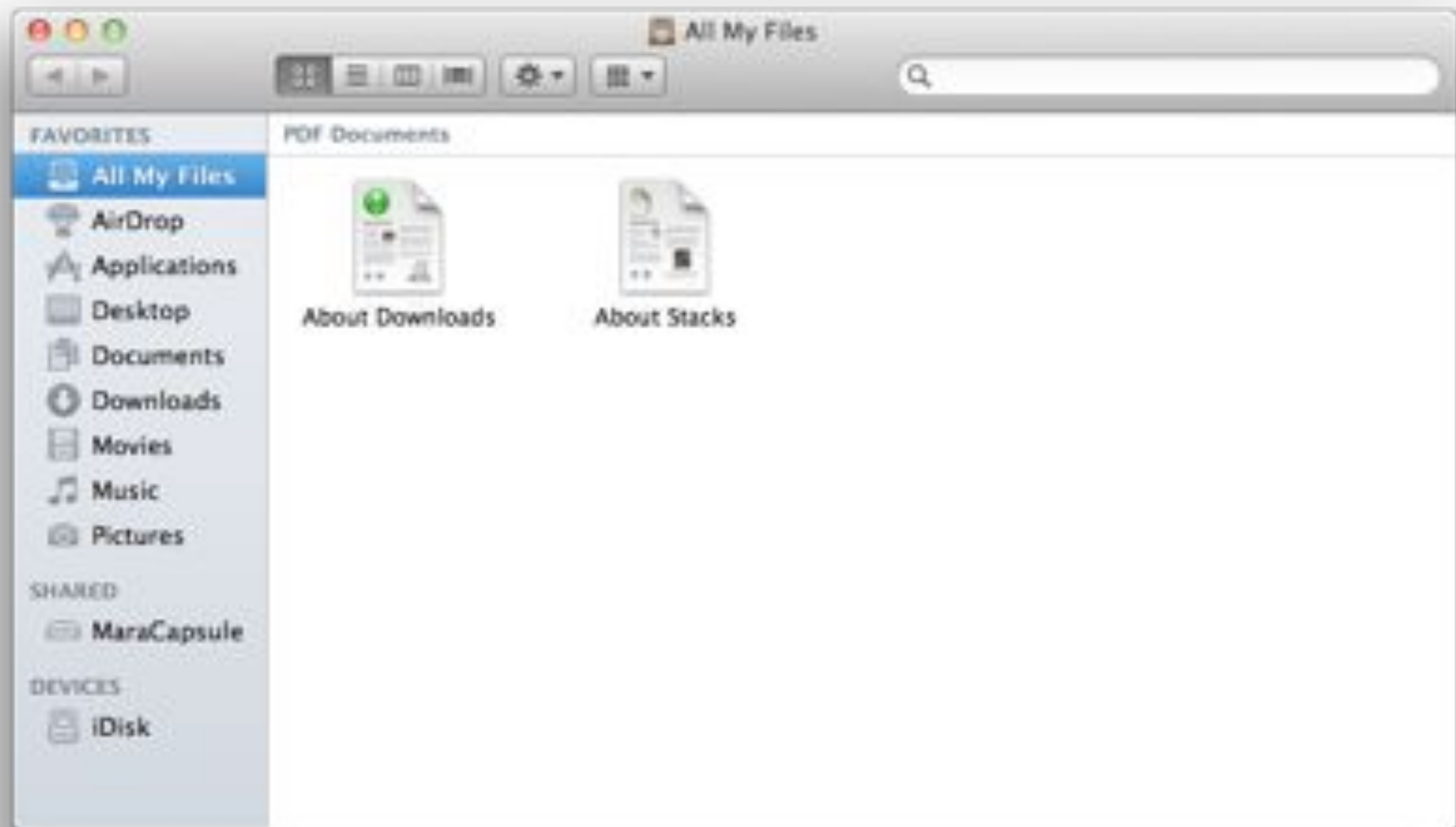
# Appendix:

# Mouse Basics



Click the Finder (lower left) to open a Finder window.





Double click the 'About Downloads' file to open it.



The file is displayed. Notice that the application name at the top left of the screen has changed to Preview.



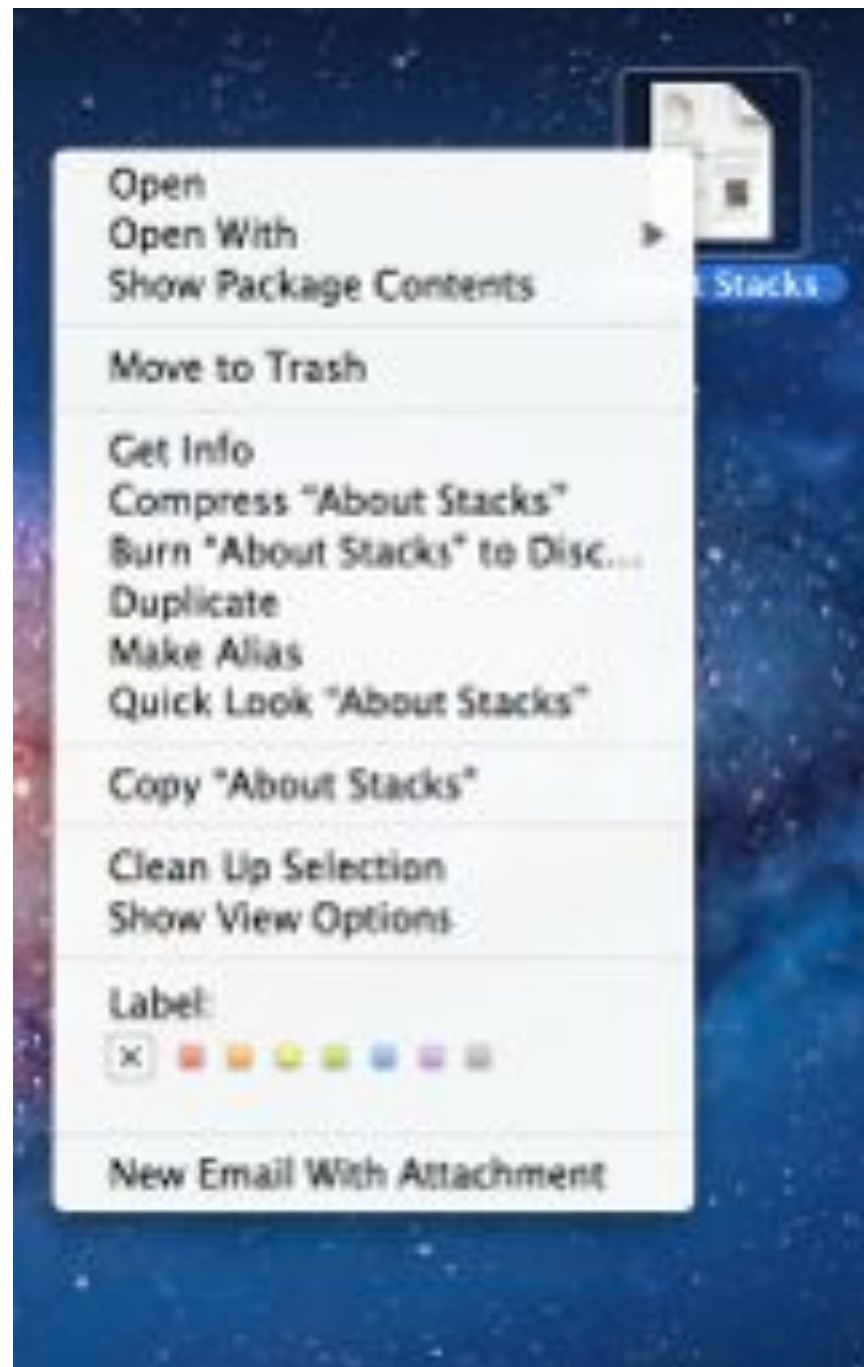
Choose Quit Preview from the Preview menu. Notice the name at the top of the screen changes back to Finder.



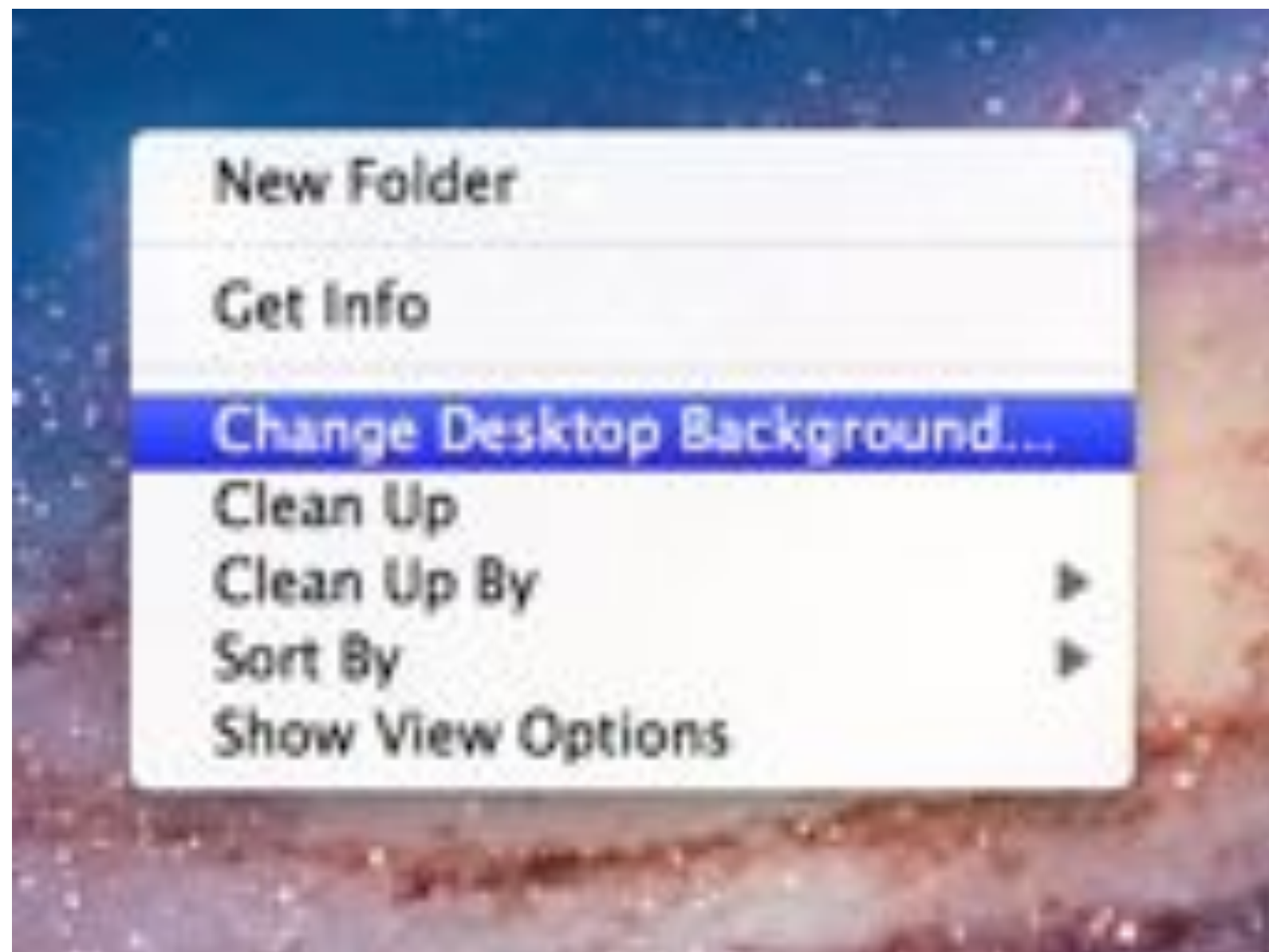


Drag About Stacks to the Desktop. Note that All My Files always shows you all the files that belong to you, regardless of their location in the filesystem.





Right-click on About Stacks to show the contextual menu



Right-click on Desktop to change Desktop pattern.

## 2. User accounts

## 2.1 User account types





Choose System Preferences from the Apple menu.



Click on Users and Groups.



Click on the little padlock on lower left side.



Put in the admin username and password and click OK to unlock.





Click on the + sign.

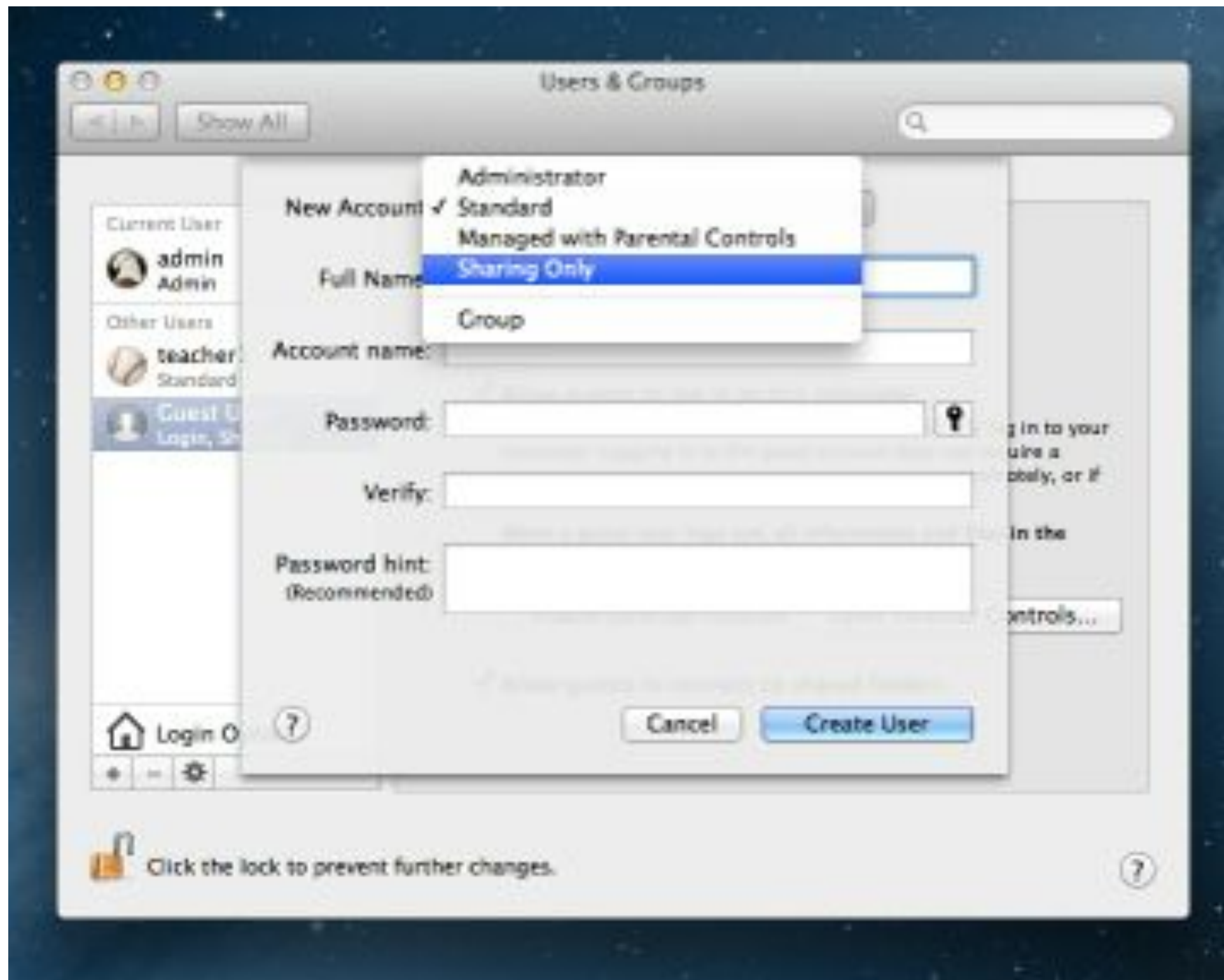


Enter a username and password you'd like to use for this account. Normally I do all my work in a standard account and only use the administrator account to install software or do other administrative task. Better security this way.

Click Create Account. If you see a message onscreen about automatic login, click Keep automatic login.



Click Guest User. Tick Allow guests to log in to this computer.

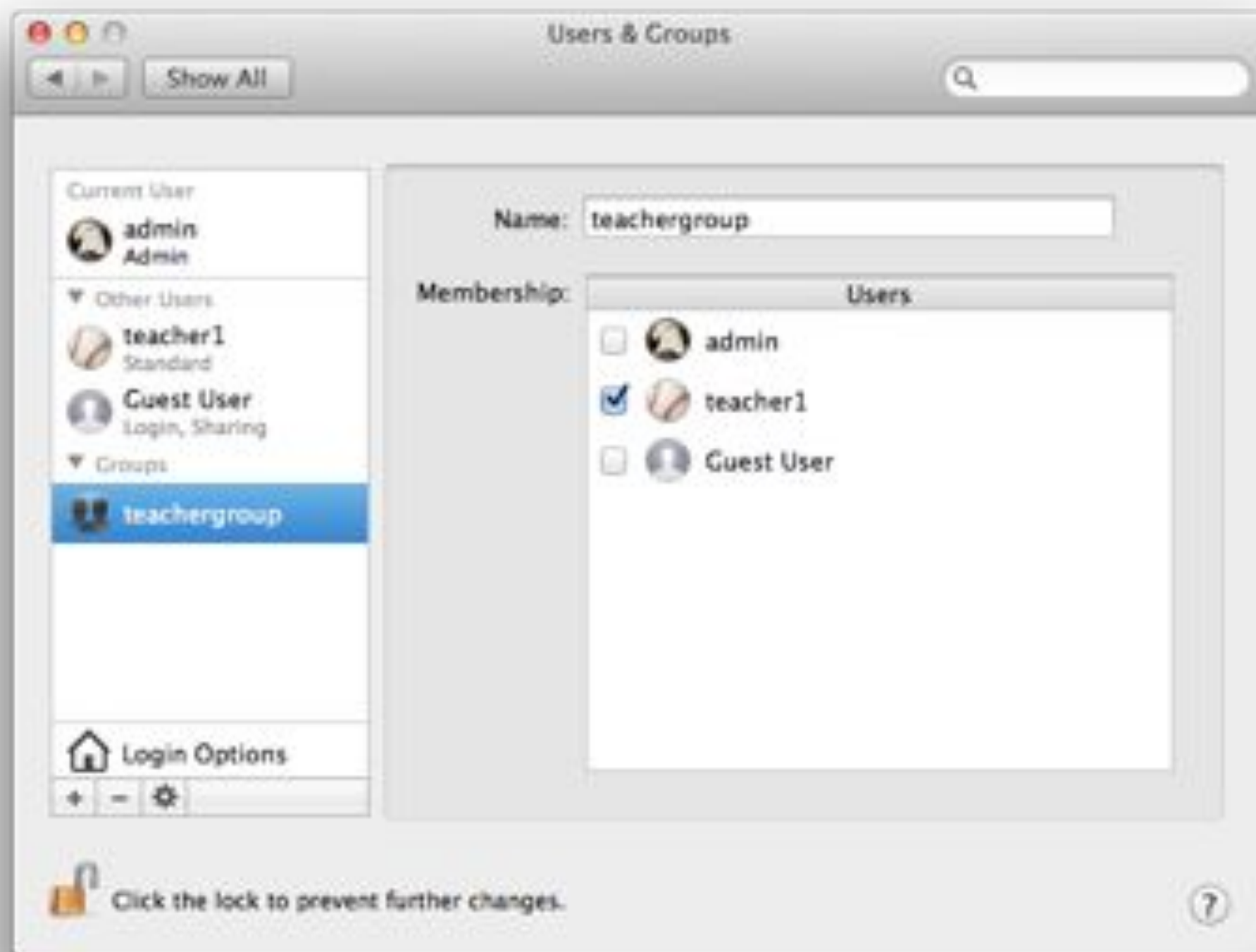


Click +. From the New Account menu you can choose Sharing only. This is for users that can only access the Mac over the network. We won't be creating this account.





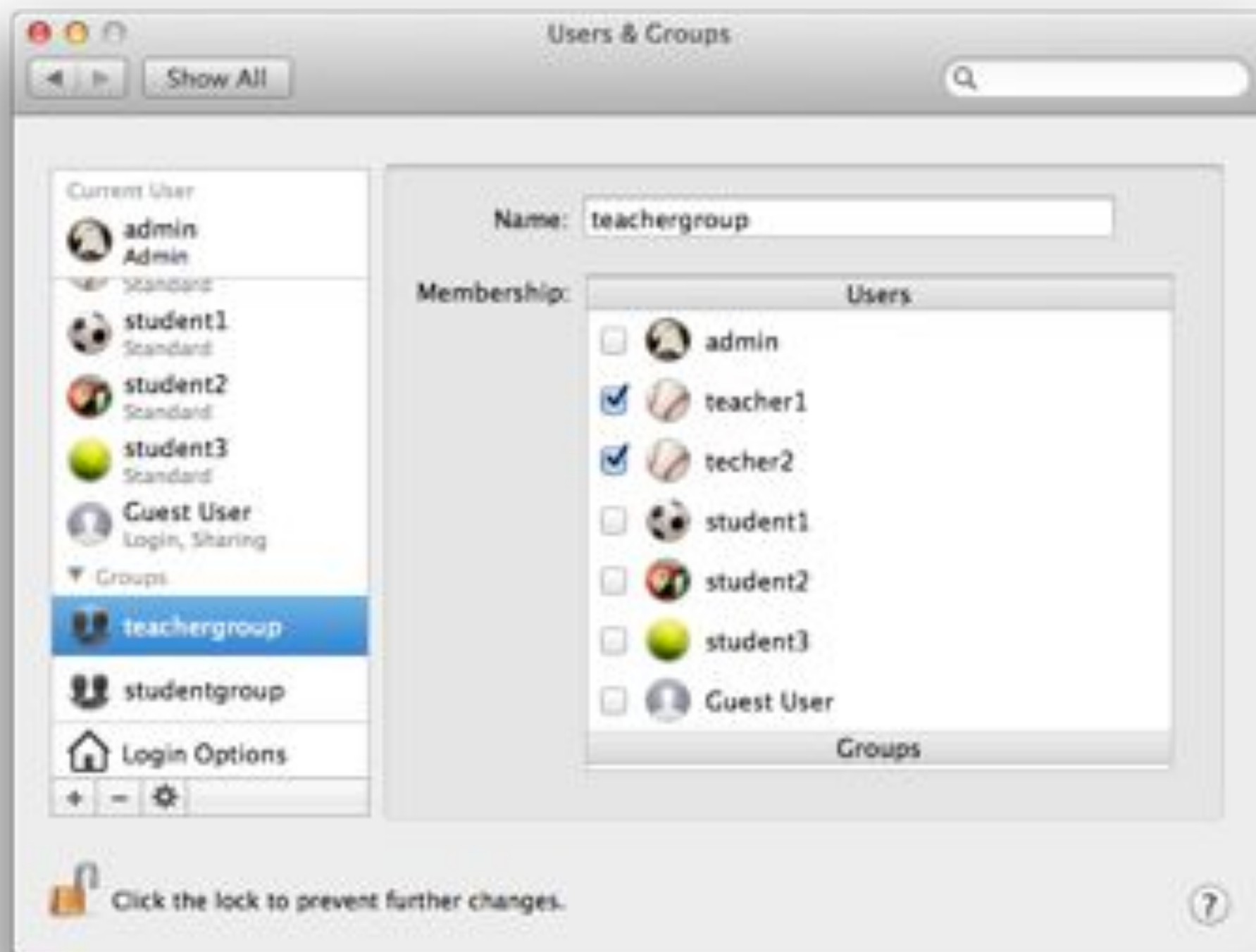
Change the menu to Group. Create a new group, teachergroup.



Enable teacher1 in the teachergroup group.



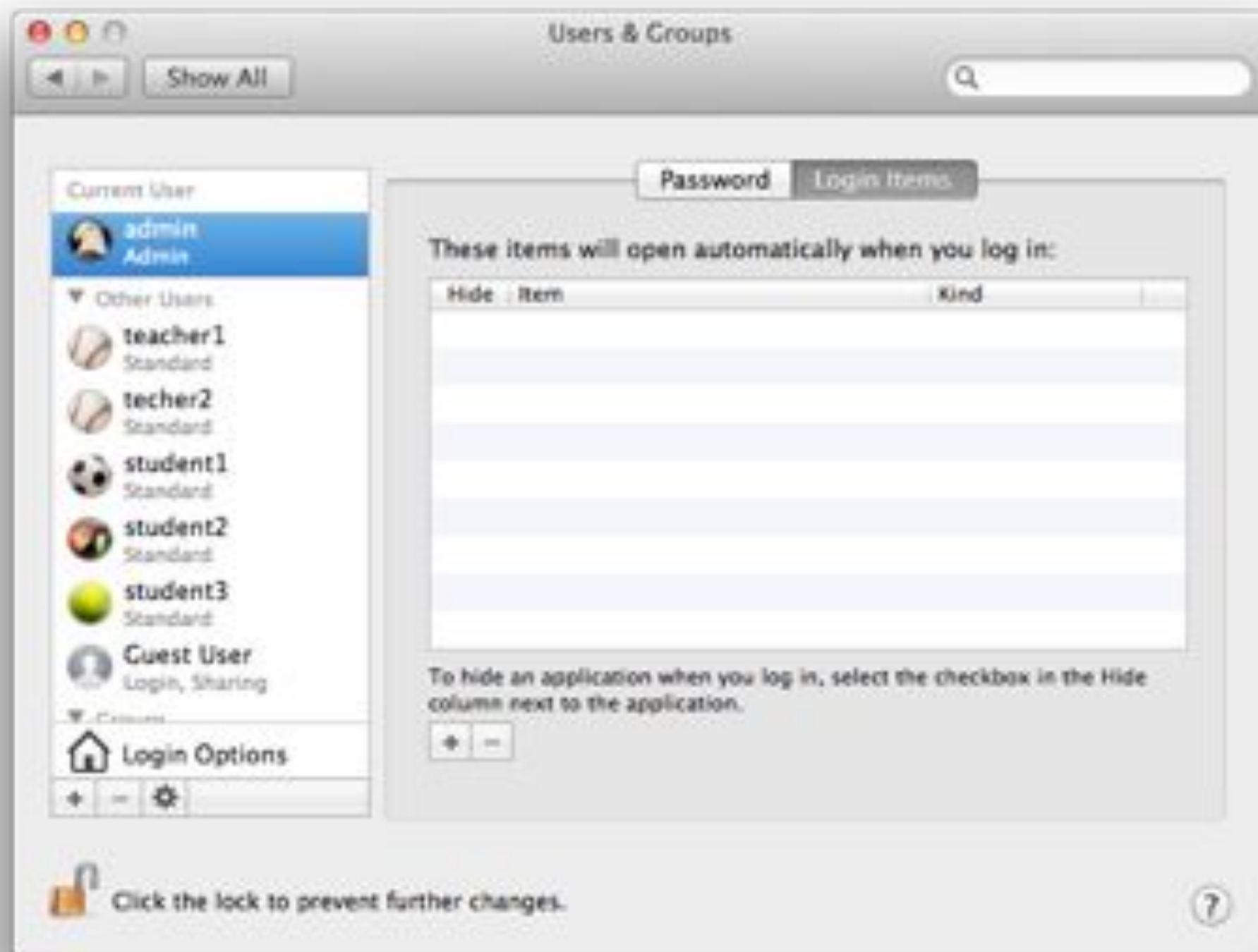
Create the following standard accounts, techer2 (purposely mis-spelled), student1, student2 and student3.



Add all teachers to the teachergroup group and all students to the studentgroup group.



# 2.2 Login Items



If you want stuff to start up automatically when you log in, drag it to the Login items.

## 2.3 Parental Controls



To restrict what a student can do, set Parental controls on the desired account. Here we use student3. Click Open Parental Controls...



Tick Use Simple Finder, and tick Limit Applications. Disable all applications except for Safari and TextEdit.





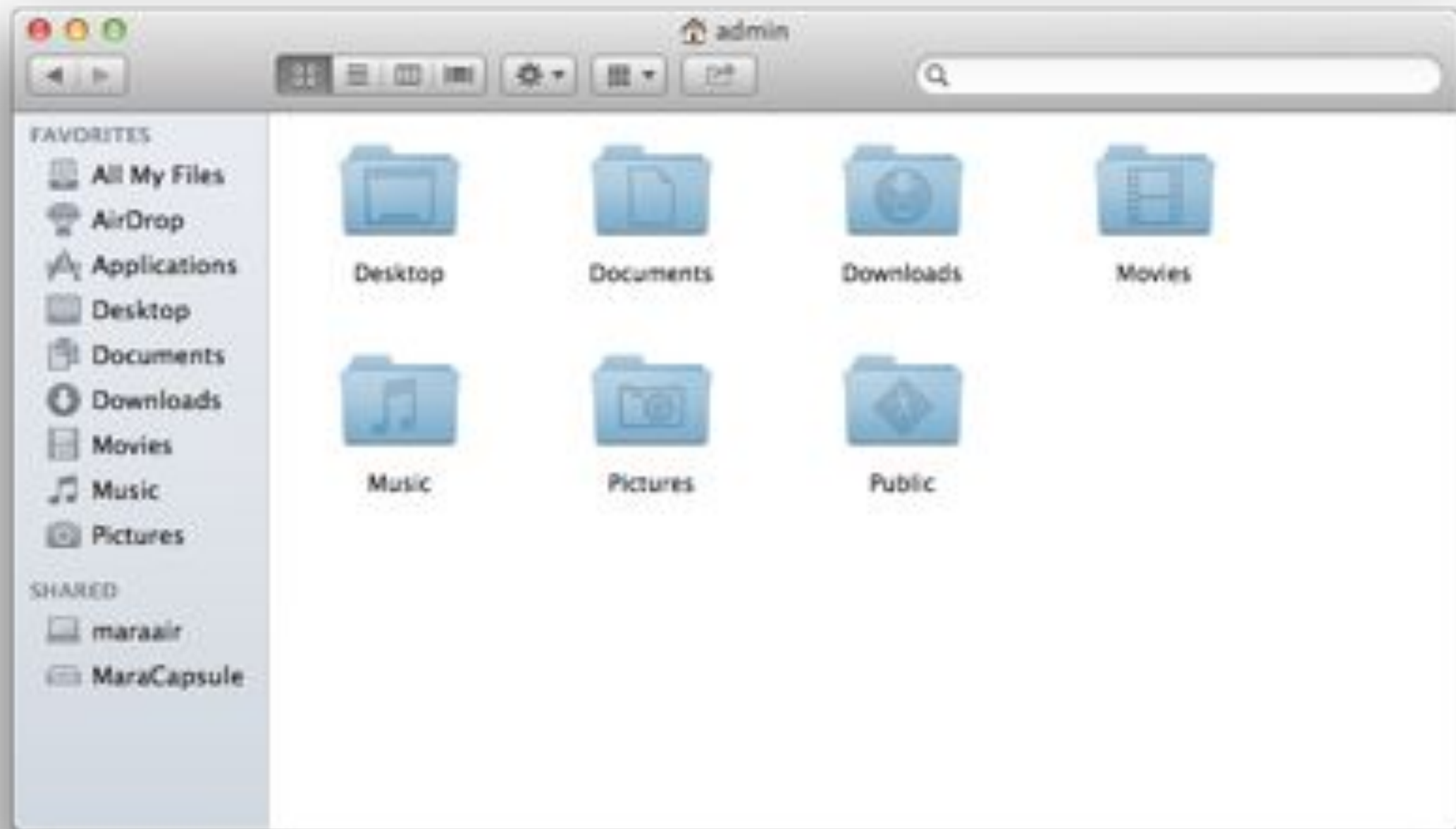


For Web, tick allow access to only these websites.



When you do a Fast User switch to student3, this is what you see.

# 2.4 Home Folder contents



Here is what is in your home folder.

Desktop – what is on your desktop.

Documents – default save location for most programs.

Downloads – default location for files downloaded from internet.

Movies – default location for iMovie

Music – default location for GarageBand and iTunes

Pictures – default location for iPhoto

Public – shared by default, put stuff you want to share with other users here.



## 2.5 Deleting a user account



Click the account you want to delete, and click the – button.



Click Delete the home folder. Click Delete User.

## 2.6 Moving a user account



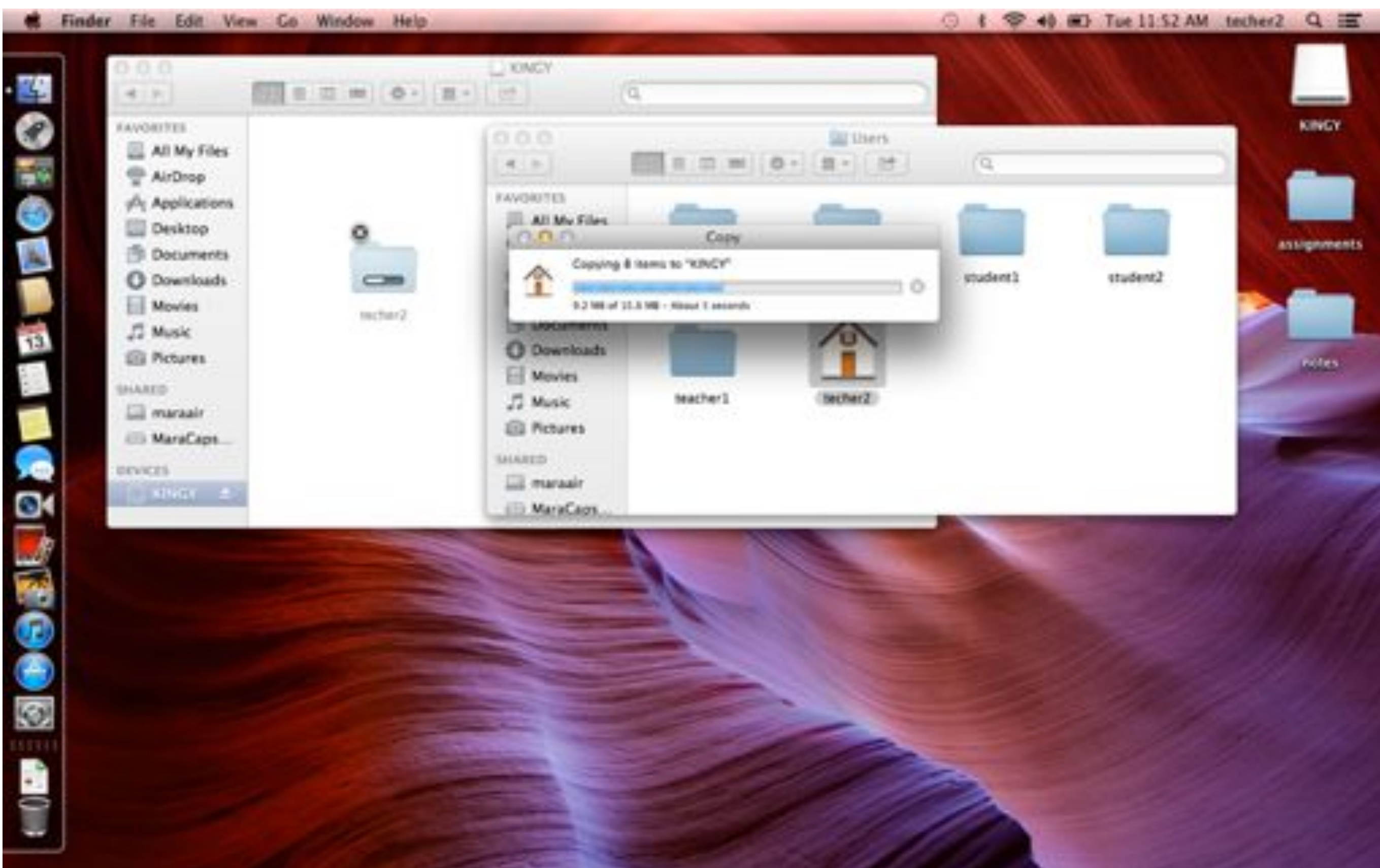


This is the techer2 account. We want to move it to another computer and fix the name.

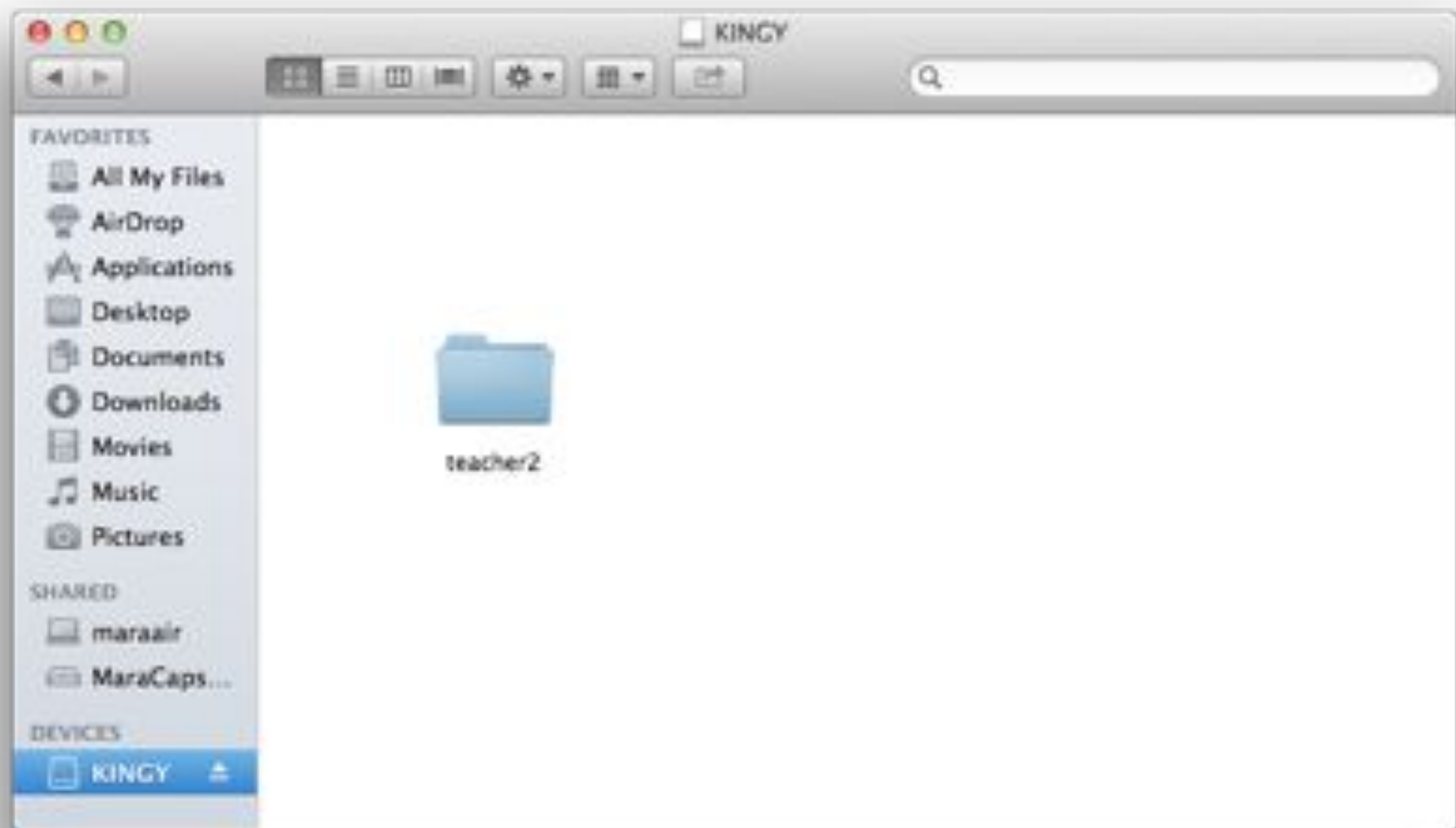


Change the Desktop Picture and create a few folders so we can see that the changes are made after the account has been migrated.





Plug in a thumbdrive. Copy teacher2's home folder to a thumbdrive.



Rename it to teacher2 on the thumbdrive.



Log out of the techer2 account.

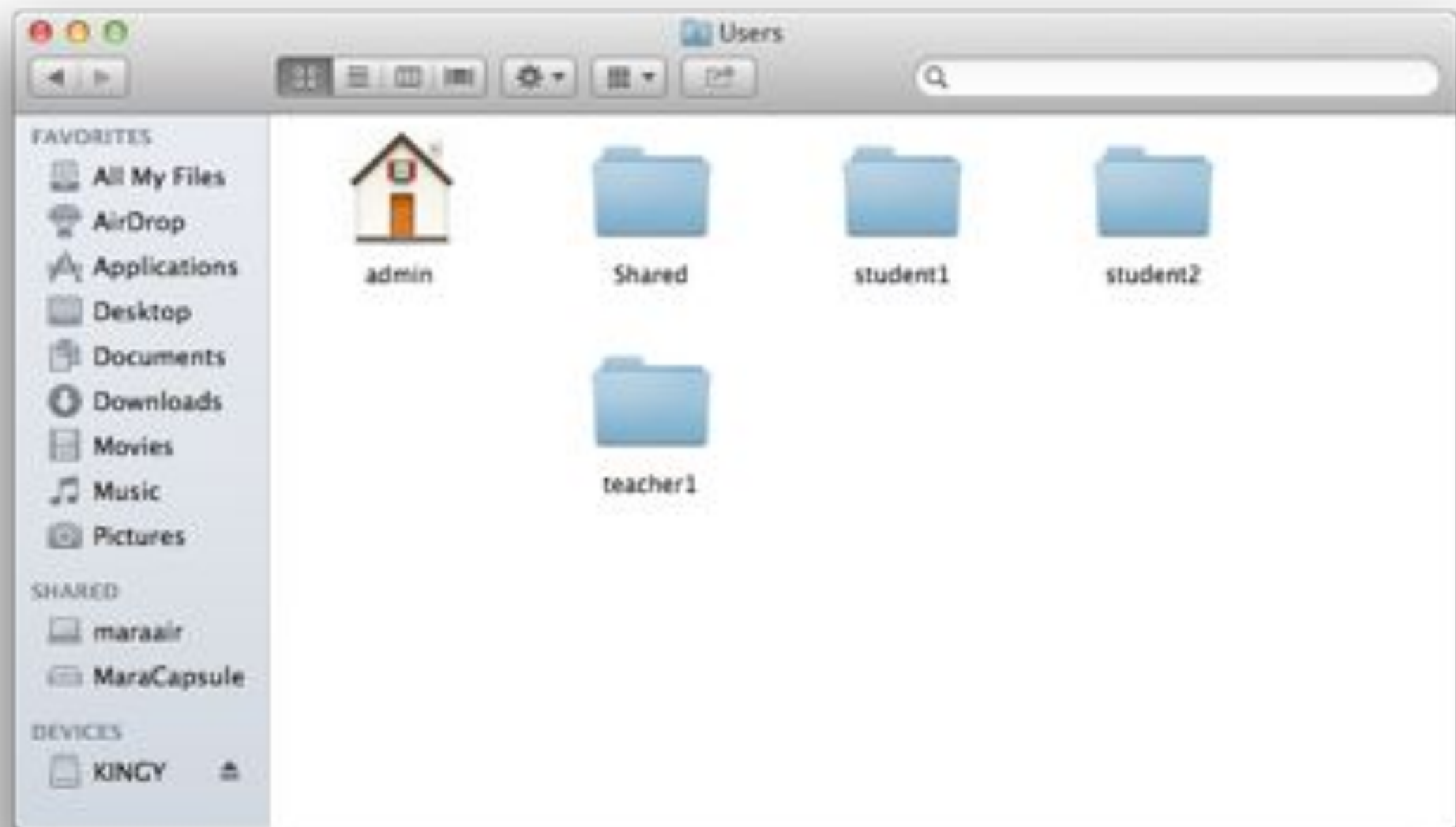




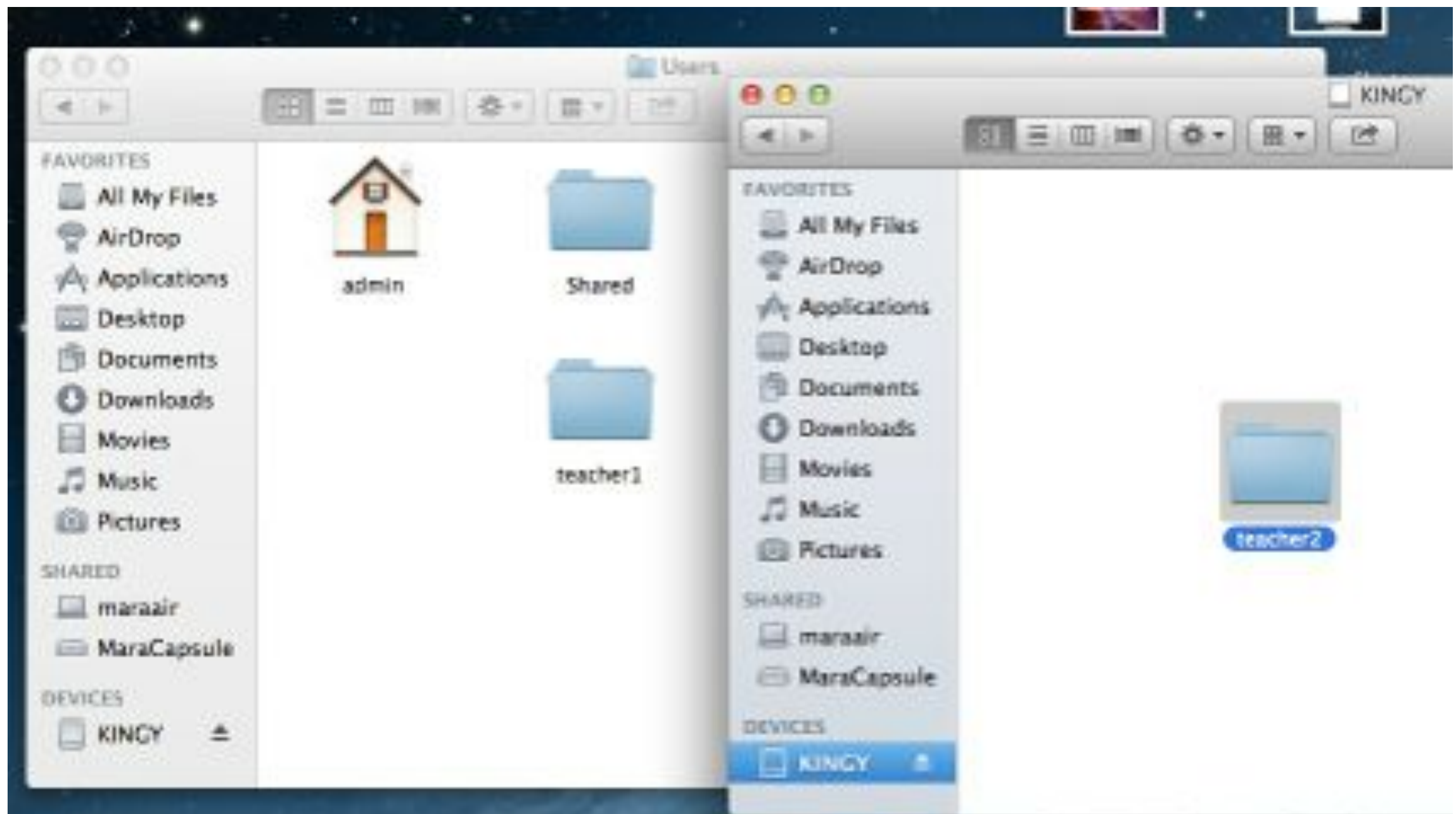
Delete the techer2 account.



Choose Delete the home folder and click Delete User.



Plug in the thumbdrive to another computer.



Copy the teacher2 account into the /Users folder.





The item "teacher2" can't be moved  
because "Users" can't be modified.

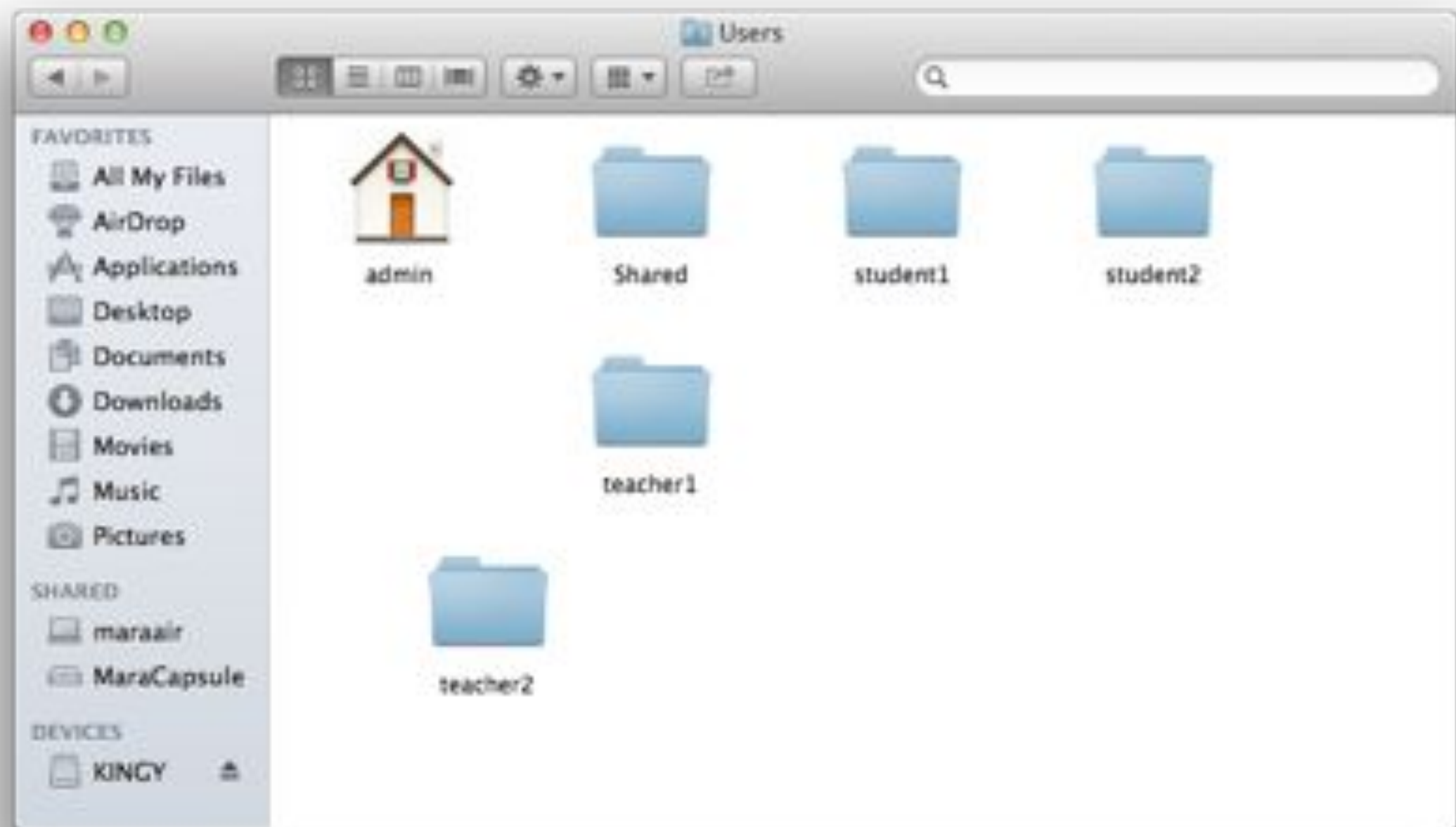
Authenticate

Cancel

Click Authenticate.



Enter the admin username and password. Click OK.



Unplug the thumbdrive.

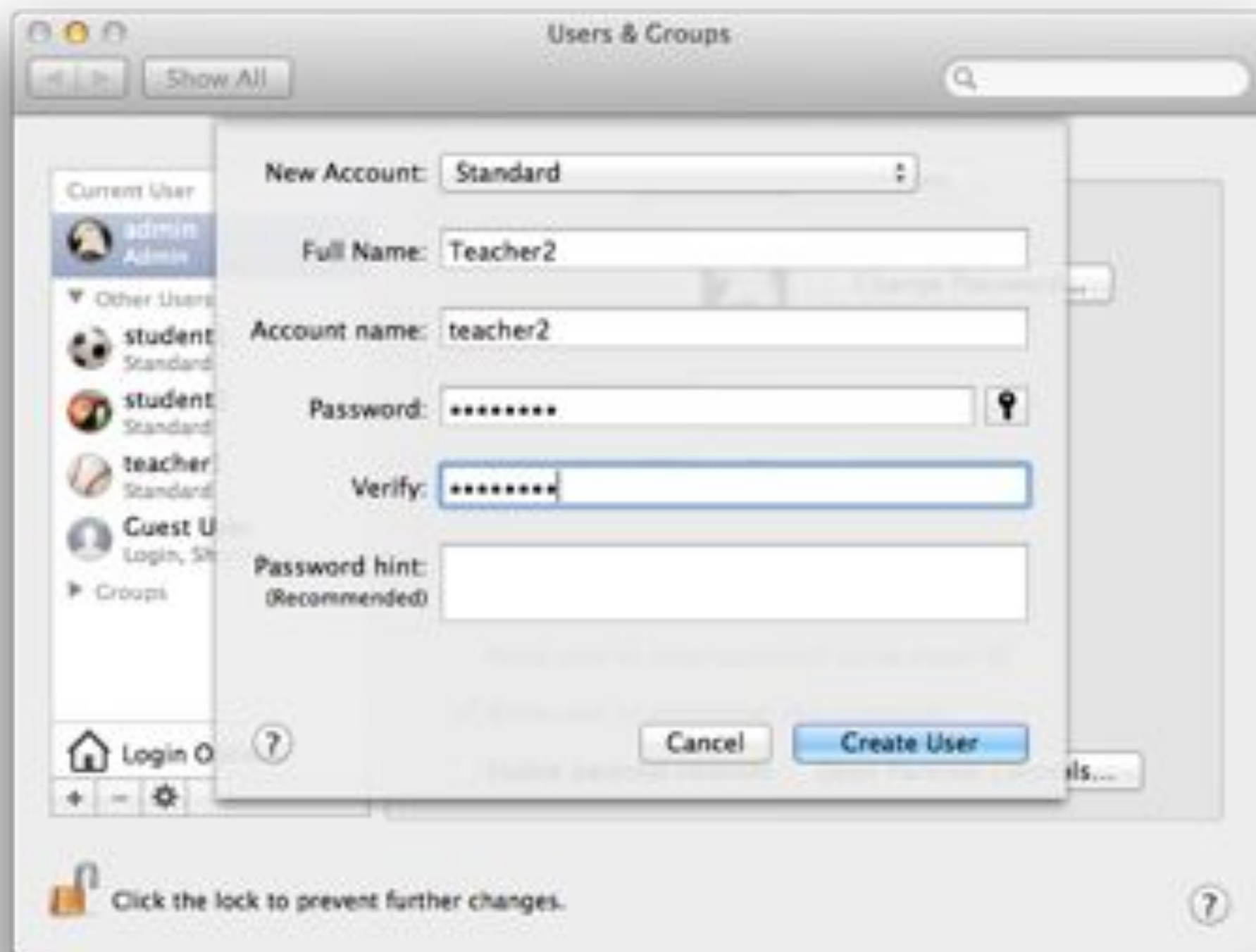


Go to System Preferences, choose Users & Groups.





Click + to create a new account.



Type in Teacher2 and click Create User. The short name must be the same as the name of the home directory.



Click Use Existing Folder.



Close System Preferences.

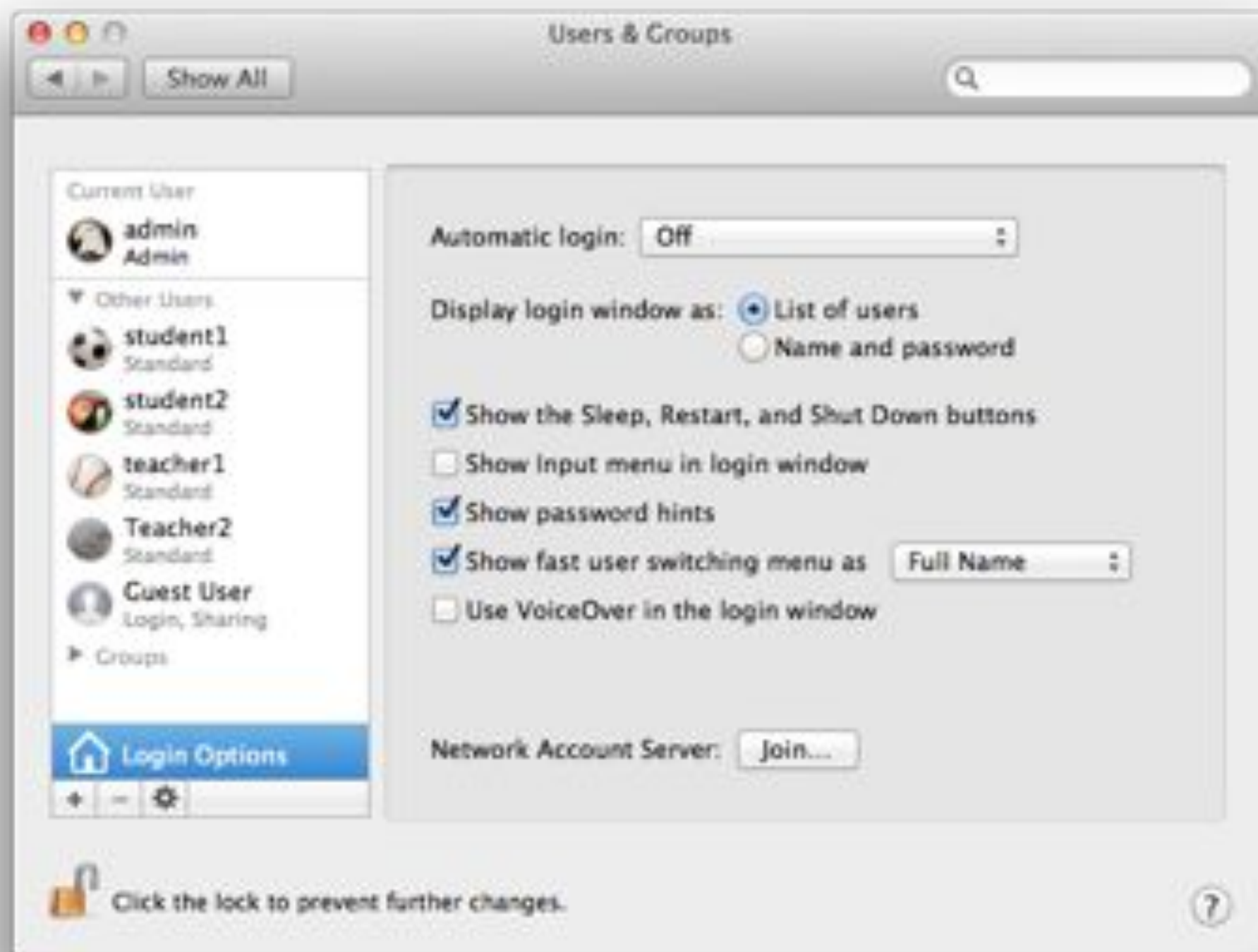




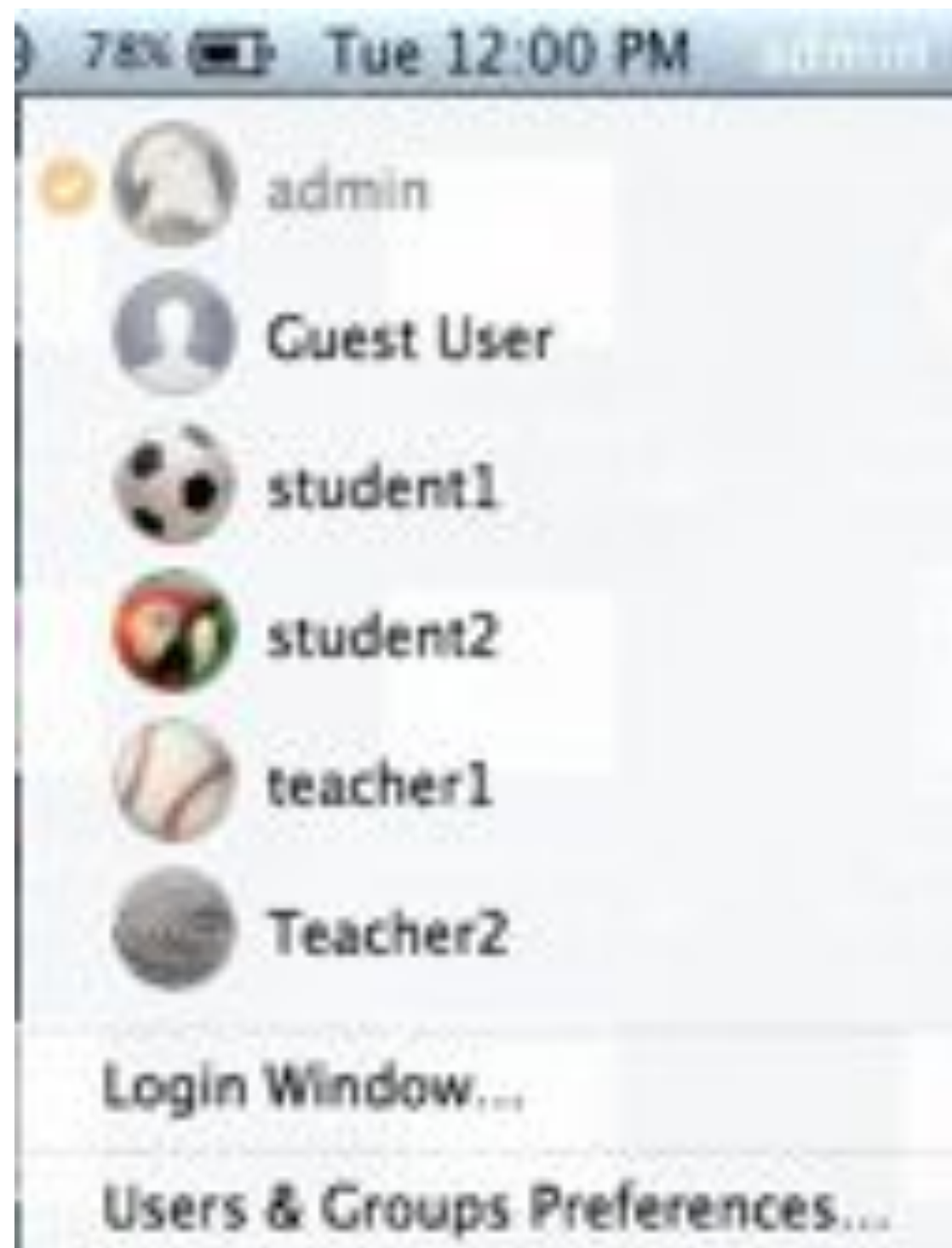
Fast user switch to the Teacher2 account and you should see that everything in that account is still there.



## 2.7 Fast User switching



Go to Login Options and confirm that Fast User switching is on.



You can switch to any user using Fast User Switching.

## 2.8 Passwords

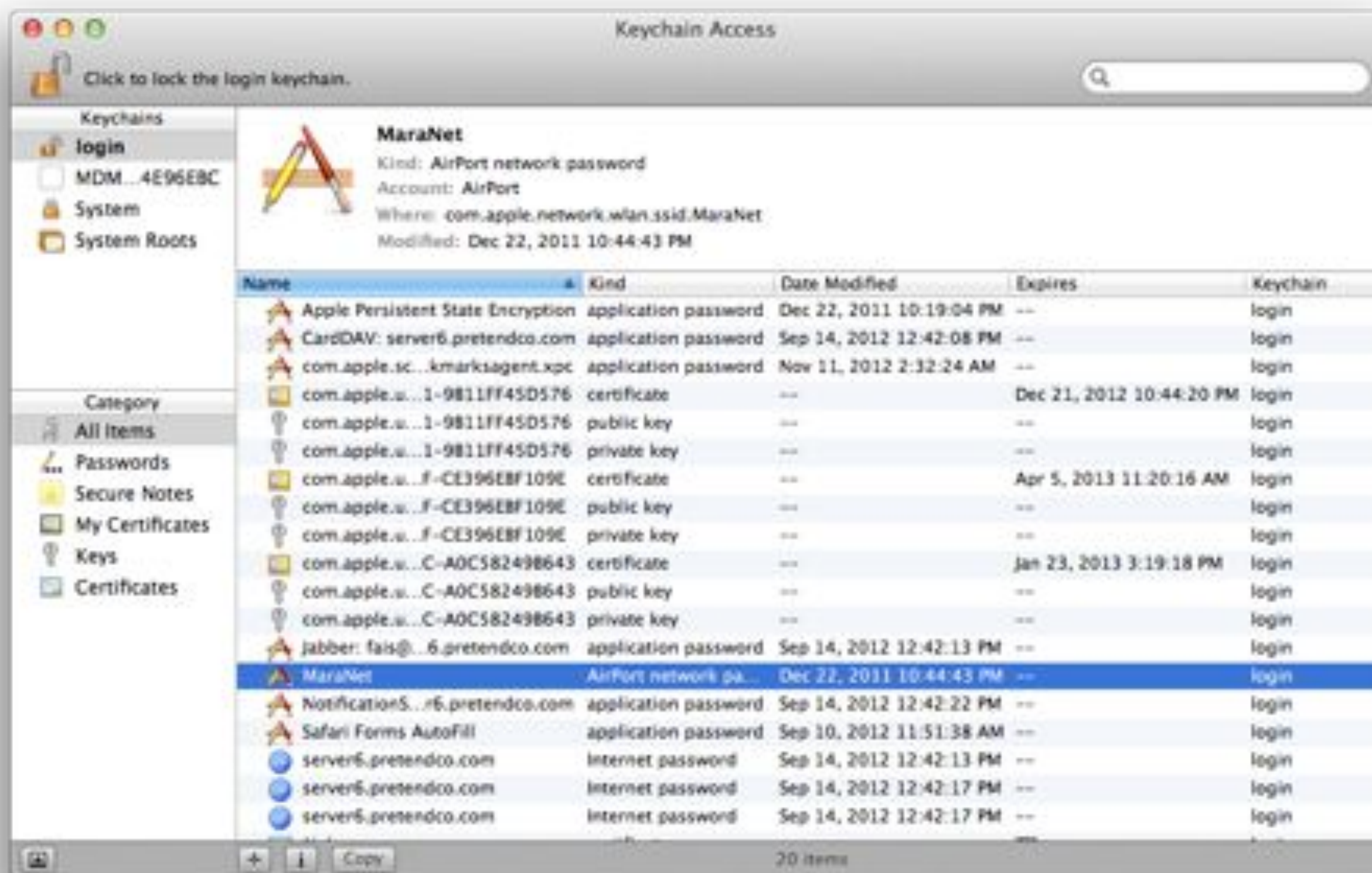




To change your password, go to your account and click Change Password.



You can set a Firmware password to disable all keyboard startup shortcuts, and to display a password field when you hold down option on startup.



A keychain file keeps all your resource passwords, such as email, chat and Wi-Fi passwords. You can see the contents of the keychain file by using the Keychain Access program. The password to the keychain file is the same as your account password.



Double clicking on any resource will display the details of that resource. Click Show password to show the resource password.





You can use a Master password to reset any account password without having to boot into the Recovery HD.



# 2.9 Security Preferences



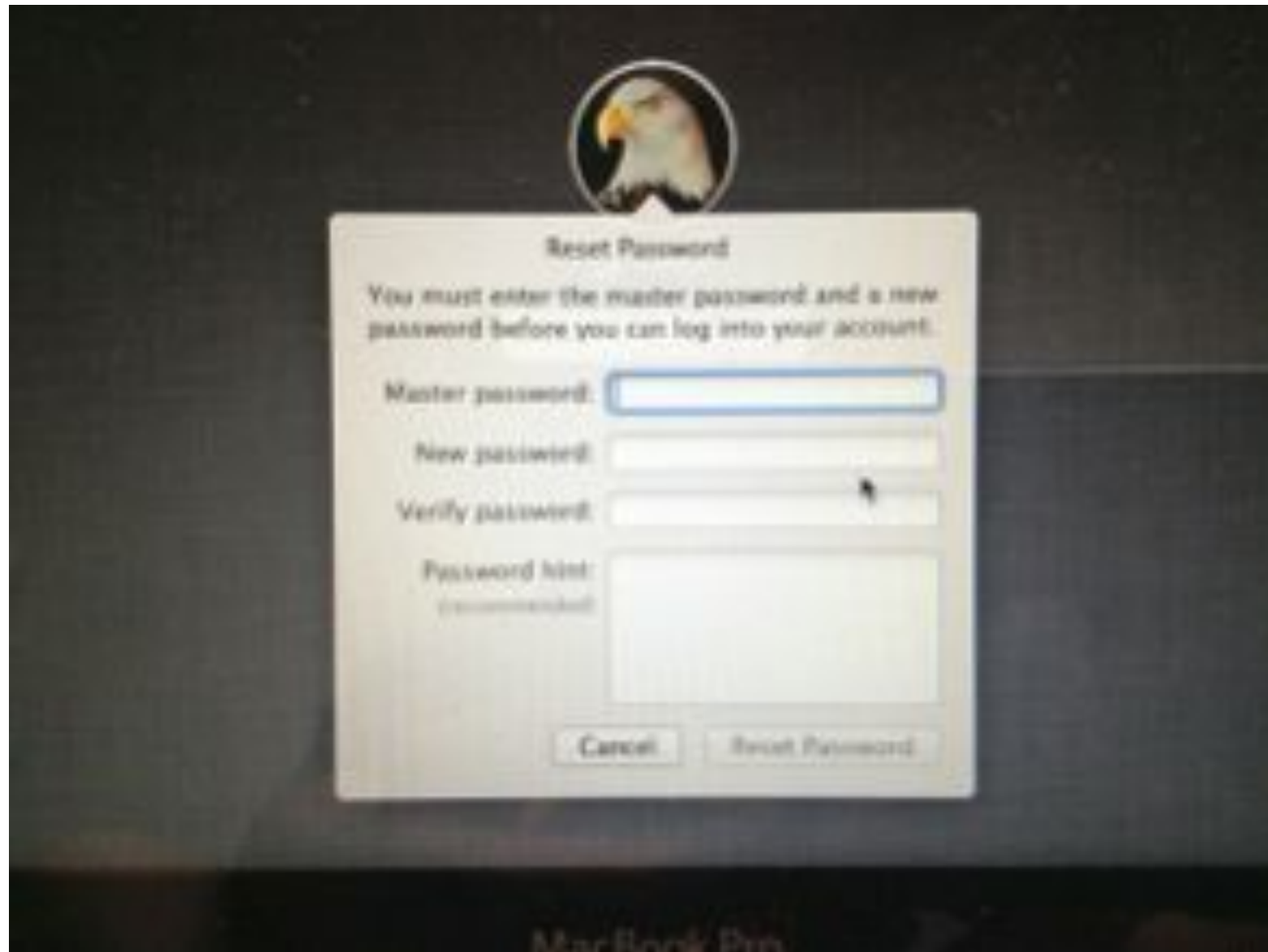
Go to System Preferences -> Security to enable passwords for screen saver and sleep, and to disable automatic login.

# 2.10 Reset Password (admin account)



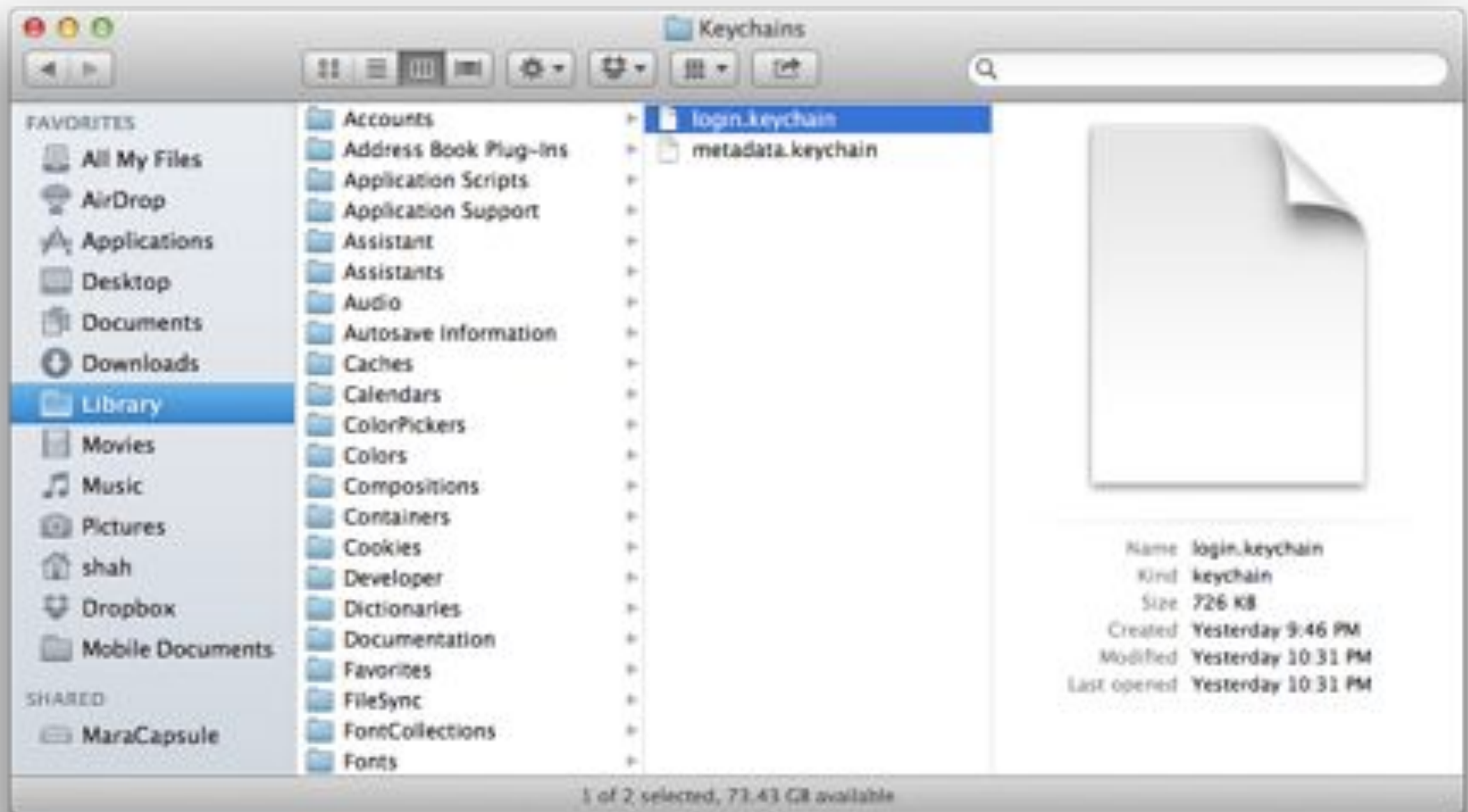
An admin user can reset any user password, however the user's keychain password is not reset.

# 2.1.1 Reset password (Master Password)



If you enter a password wrong 3 x and the master password is set, you can reset your password using a master password, but the keychain password is not reset.

# 2.12 Keychain



If you see keychain messages after a password reset, delete the keychain to force the system to create a fresh keychain file.

# 3. File Systems



# 3.1 Partition Schemes

- GUID Partition table
- Master Boot Record

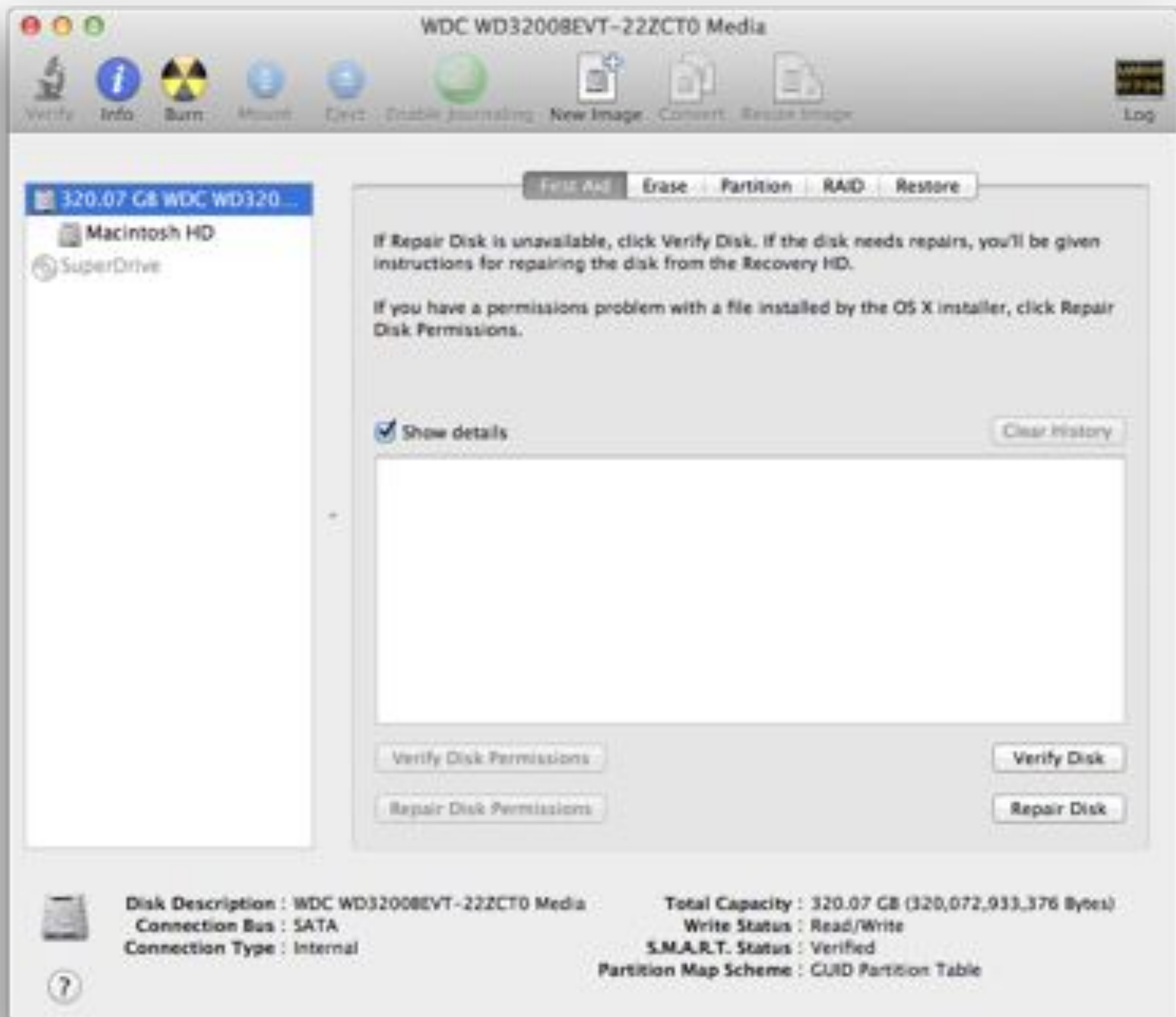
GUID Partition table is the Mac default. Windows machines use Master Boot Record.

# 3.2 Volume formats

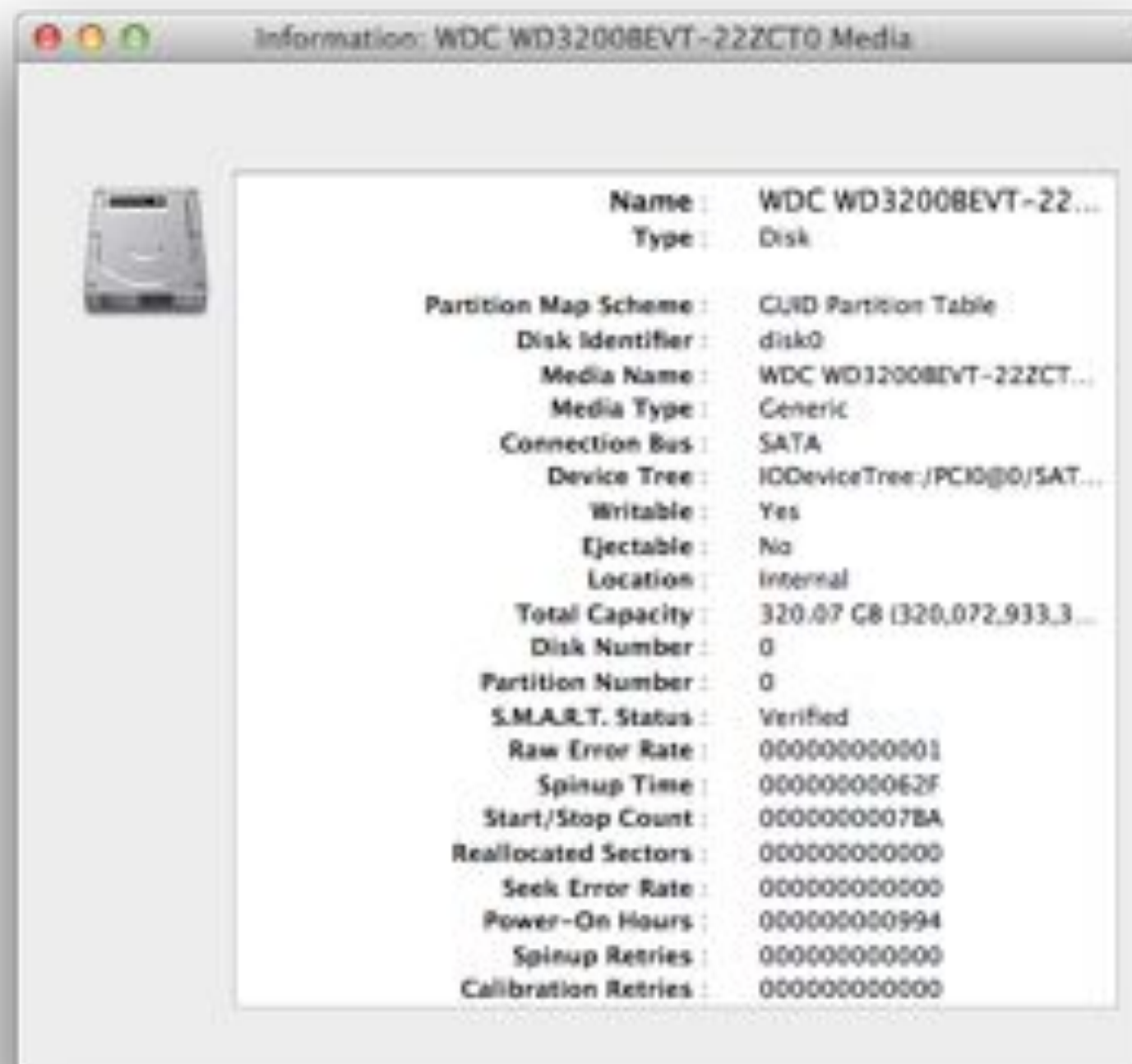
- Mac OS X Extended, Journaled
- Mac OS X Extended, Journaled, Encrypted
- FAT
- ExFAT
- NTFS (Needs Paragon NTFS for read and write)

The Mac can create all the volume formats shown except NTFS. The Mac can only read NTFS but not write to it.

## 3.3 Disk Utility

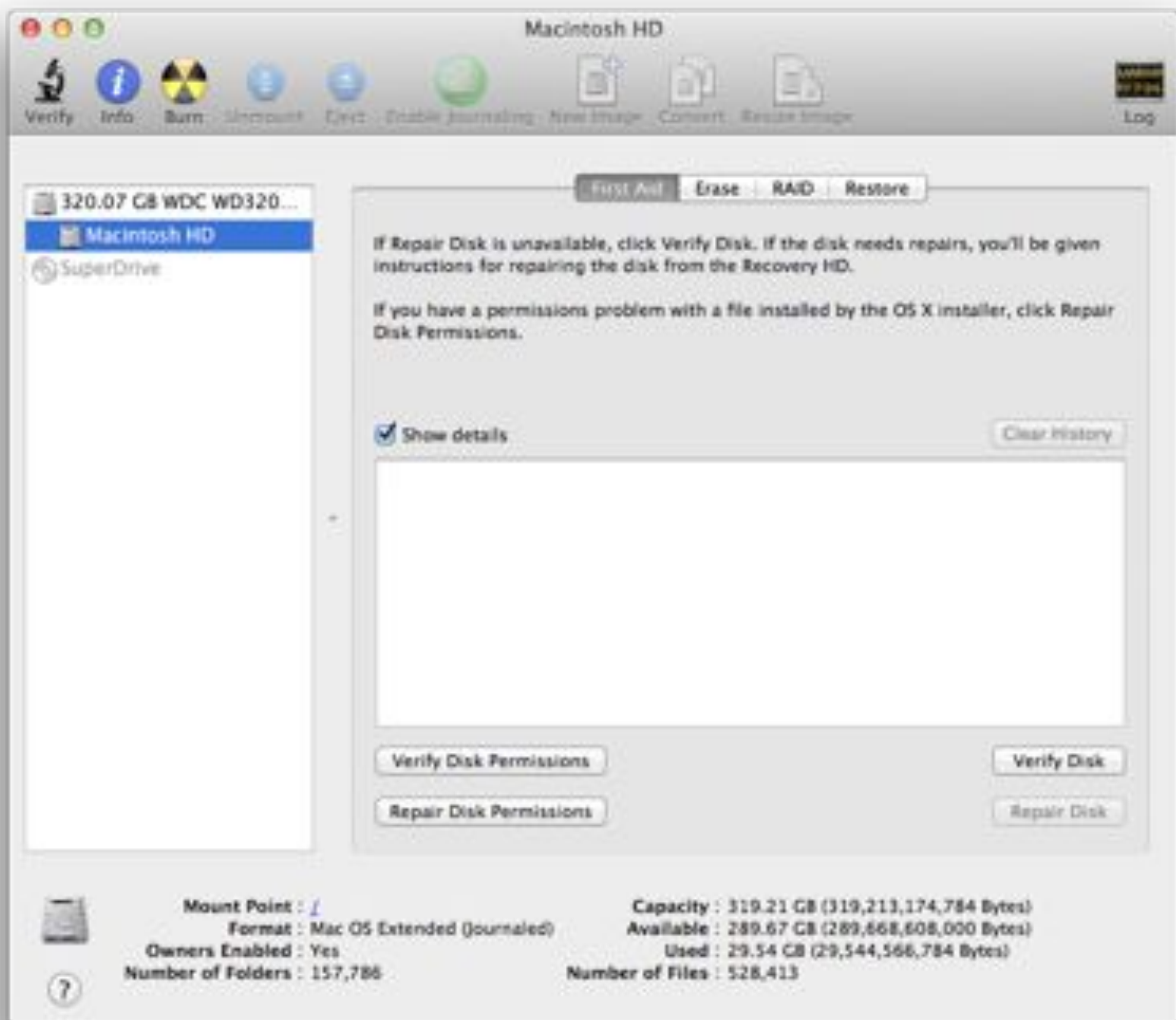


Open Disk Utility. Click on your hard disk.

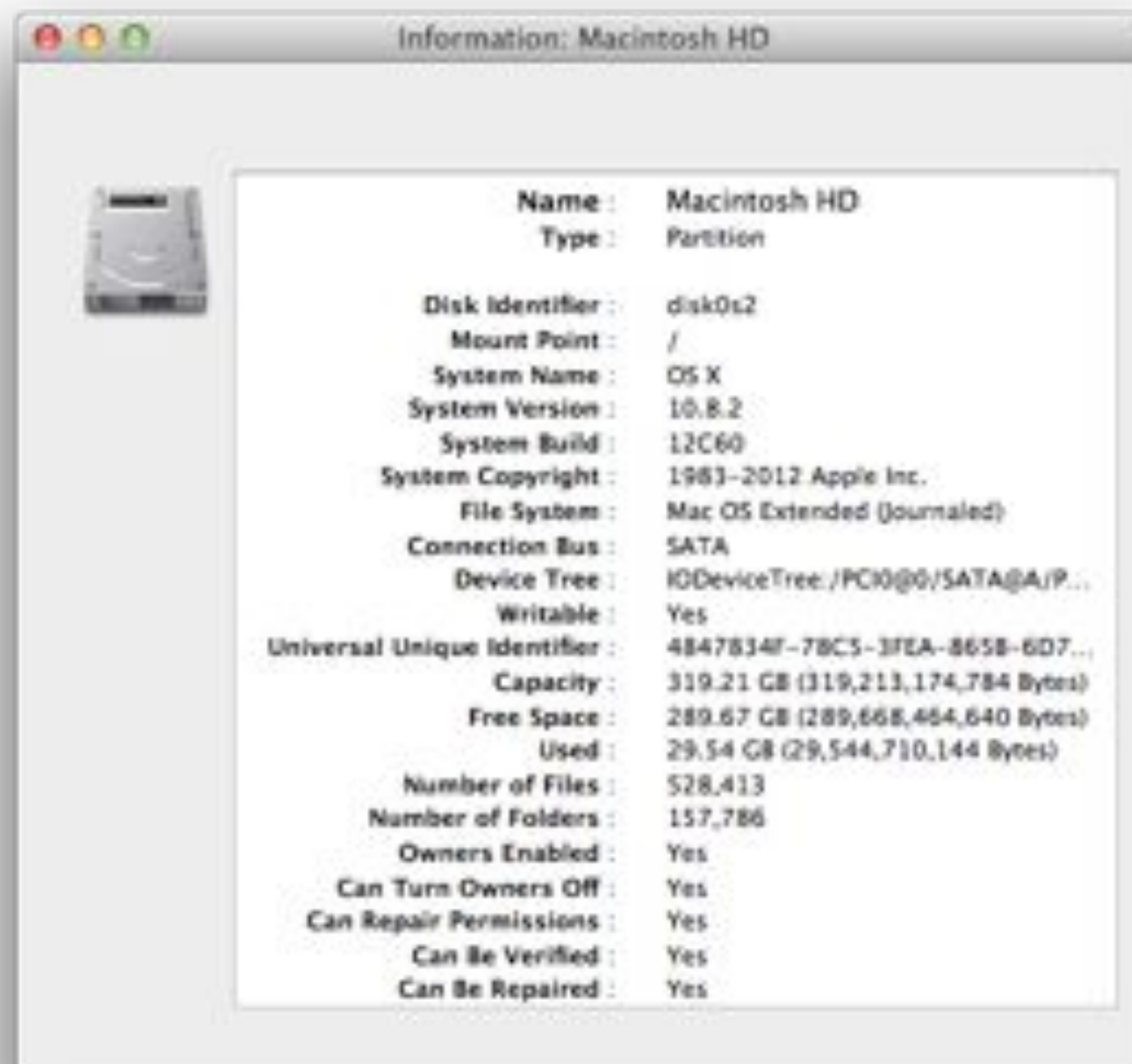


Click the info button to see information on your hard disk.

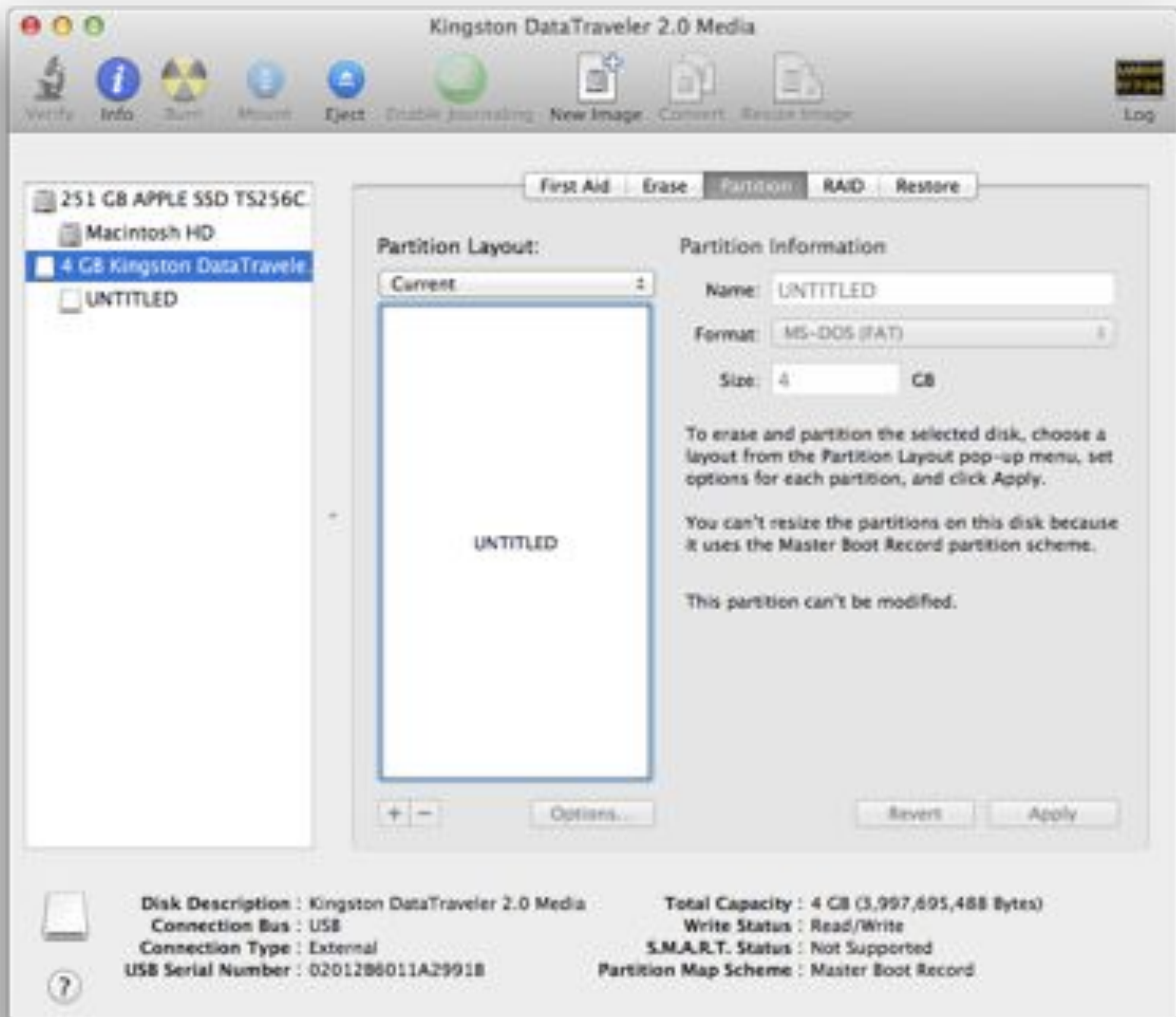




Click the partition.

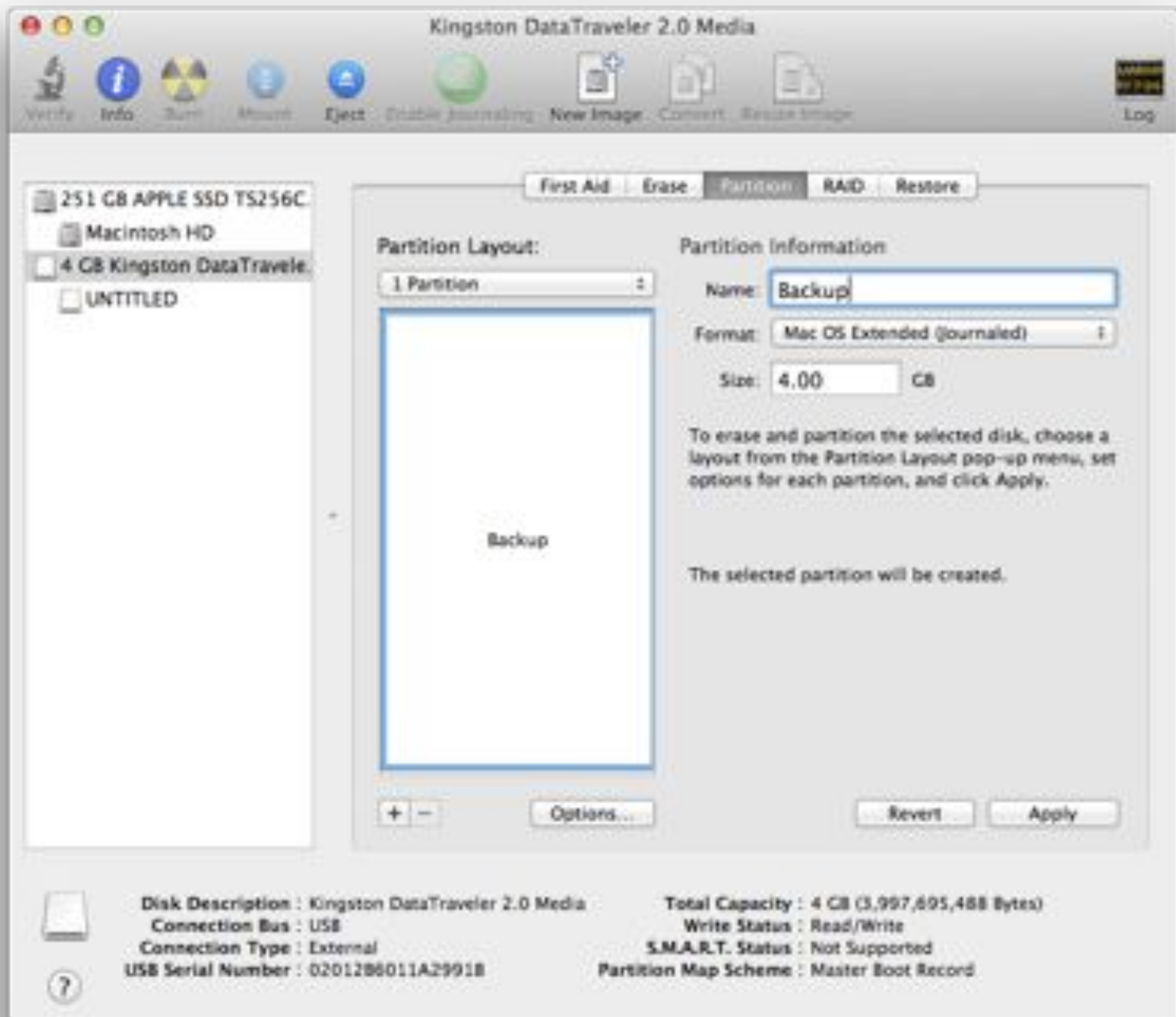


Click the info button to see information on the partition.

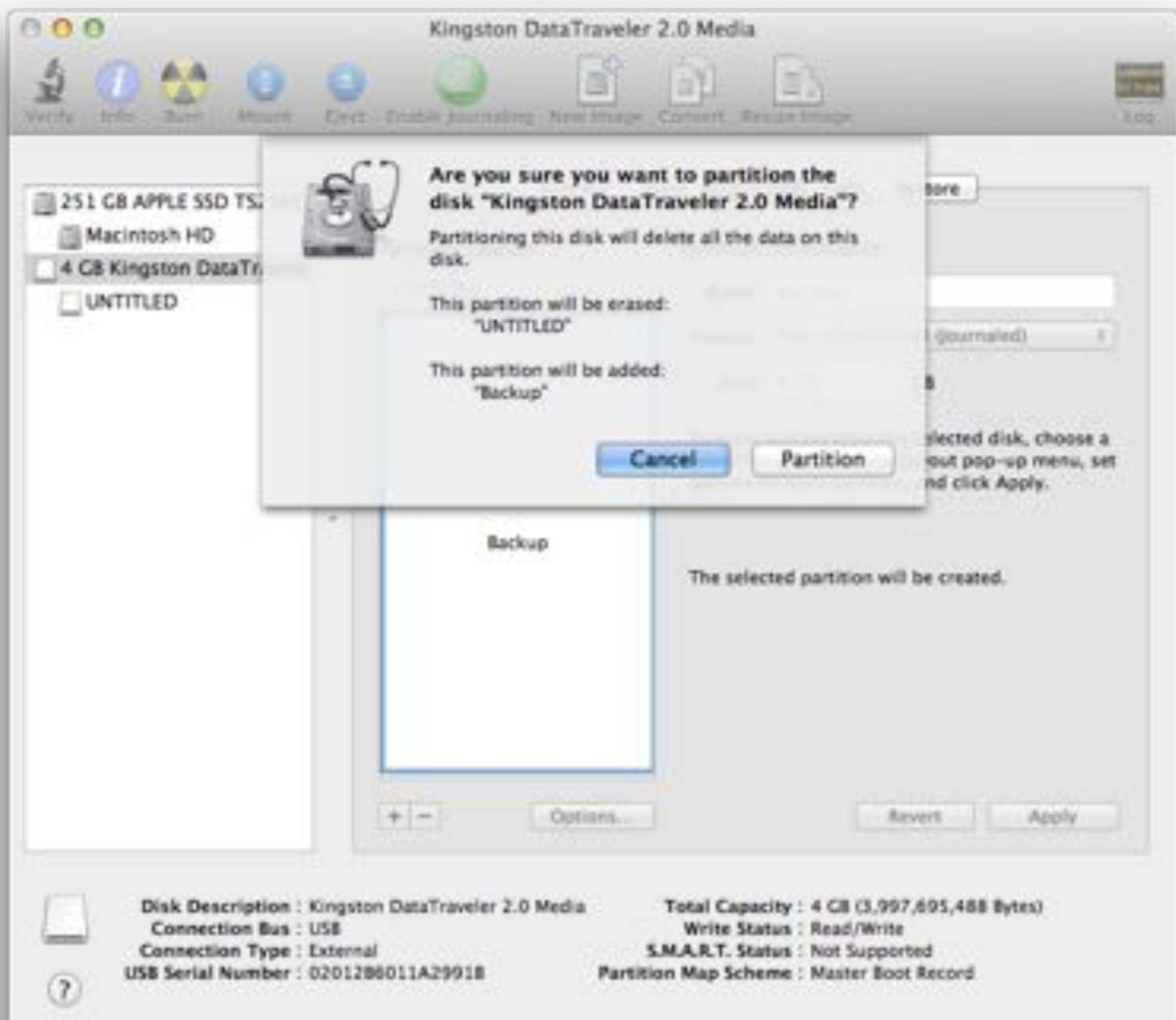


To do this part, you will need a thumbdrive or hard disk that you can erase. Plug the thumbdrive into the Mac's USB port. It will appear in Disk Utility.

**WARNING:** Do not partition your internal hard disk if you have Boot Camp installed as this will disable Boot Camp.

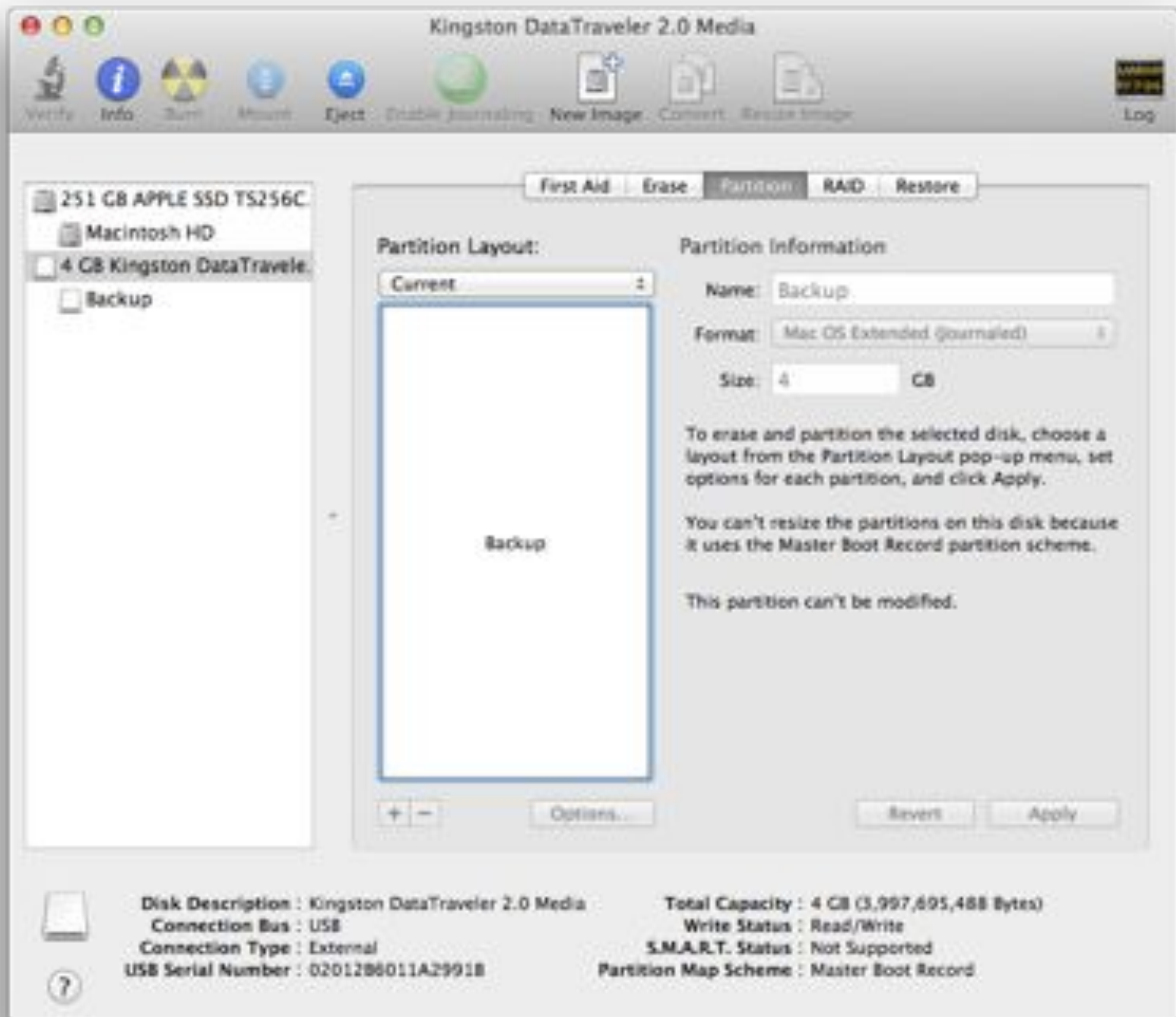


Configure as follows:  
Partition Layout: 1 Partition  
Name: Backup  
Format: Mac OS Extended Journaled  
Click Apply.  
WARNING: This will delete all data on the thumbdrive.

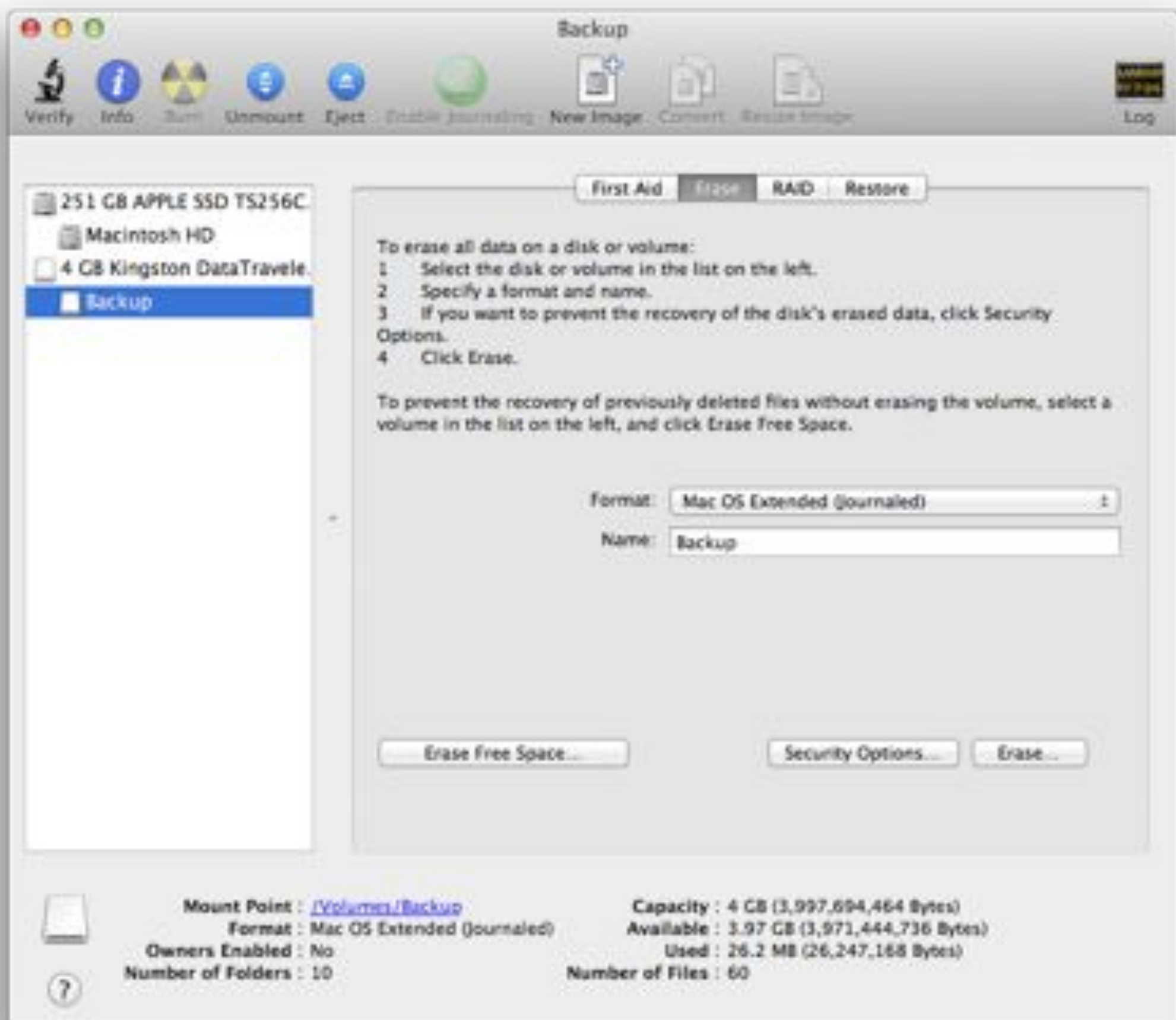


Click Partition.

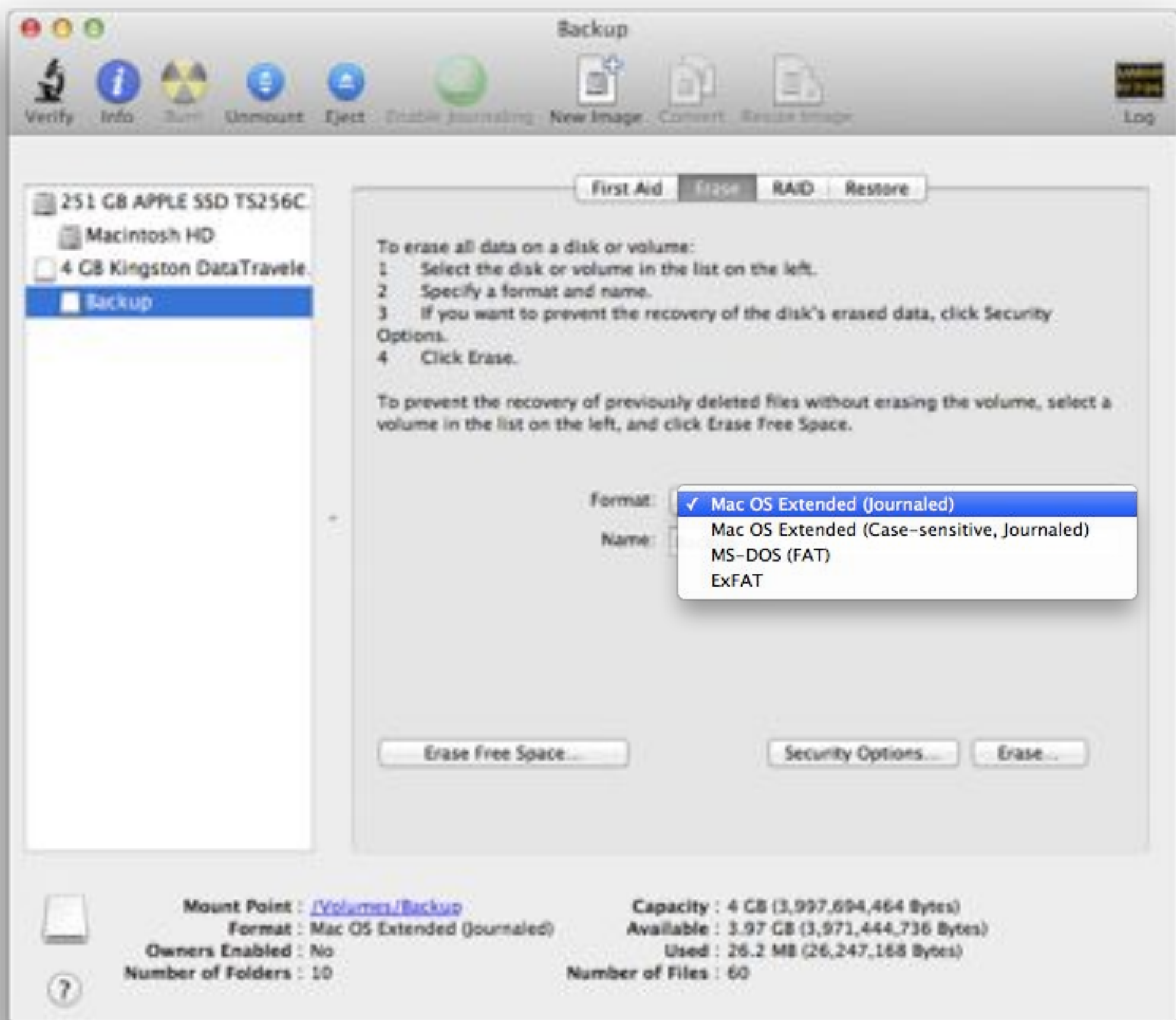




The partition has been created on the thumbdrive. The volume name is Backup and the format is Mac OS X Extended format.



Click Backup. Click Erase.

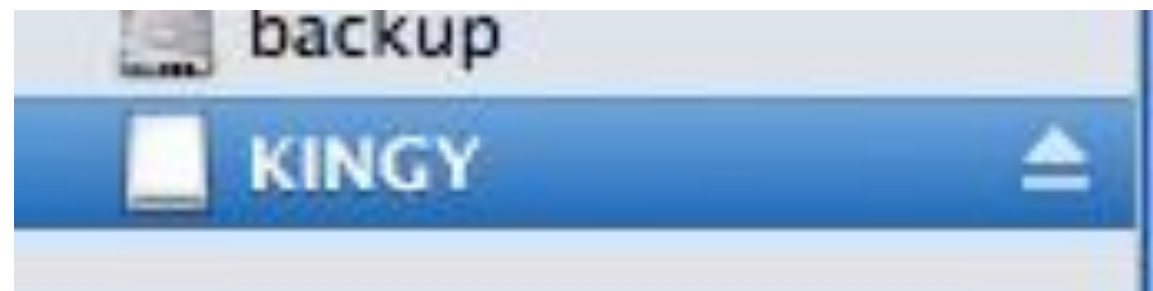


You can choose the format you want.



You can also set secure erase options.

# 3.4 Ejecting a disk



To eject a disk, right click it in the Finder and choose eject, or click the eject icon in the Finder window.



## 3.5 Permissions

# Owner, Group and Everyone

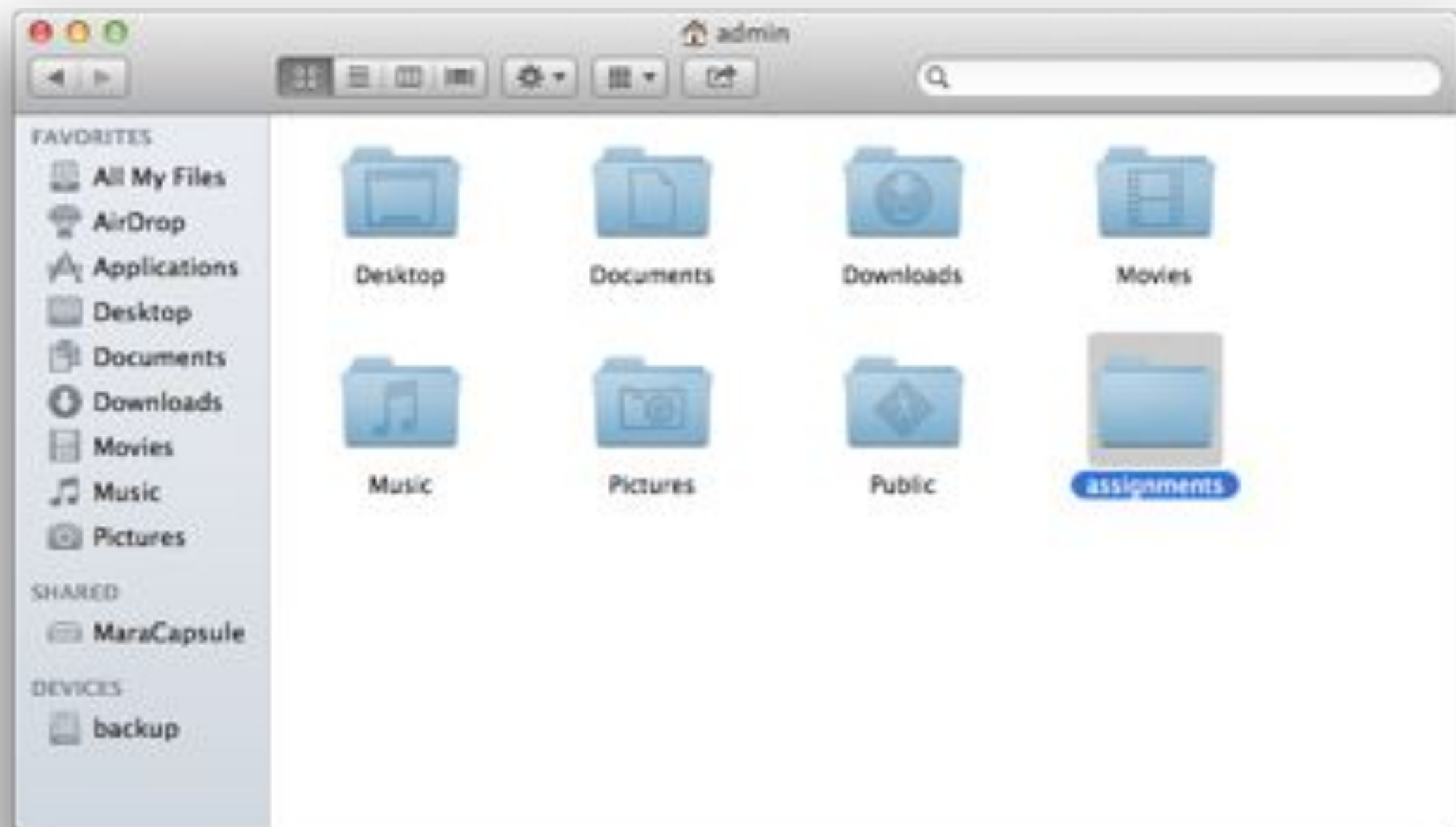
- Owner - person who creates or copies the file
- Group - group defined for the file or folder
- Everyone - everyone who is not the owner and not in the group defined

Every file and folder on the Mac has Owner, Group and Everyone permissions.

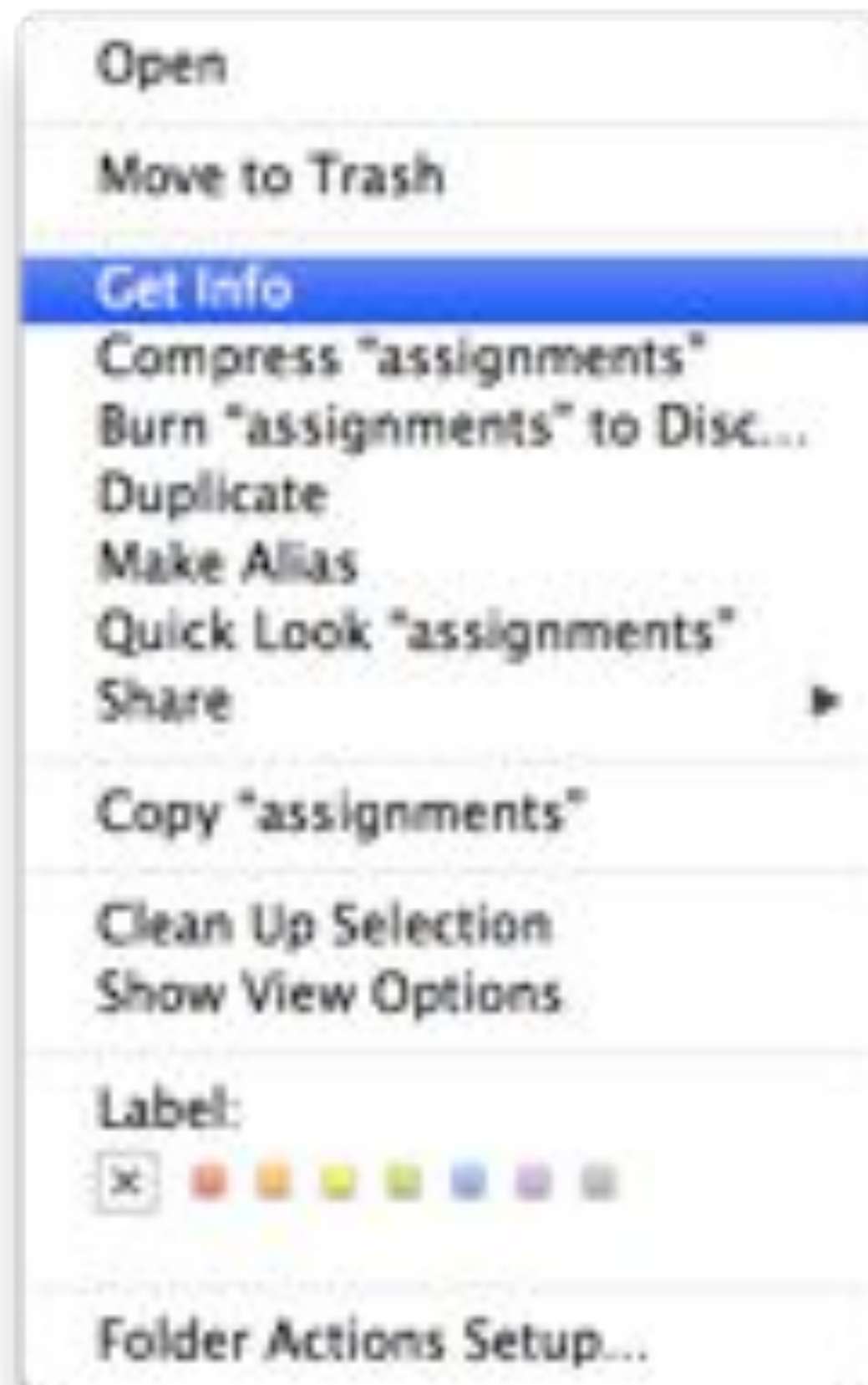
# Unix permissions

- Read
- Write
- Execute

Permissions for each level are Read, Write and Execute.

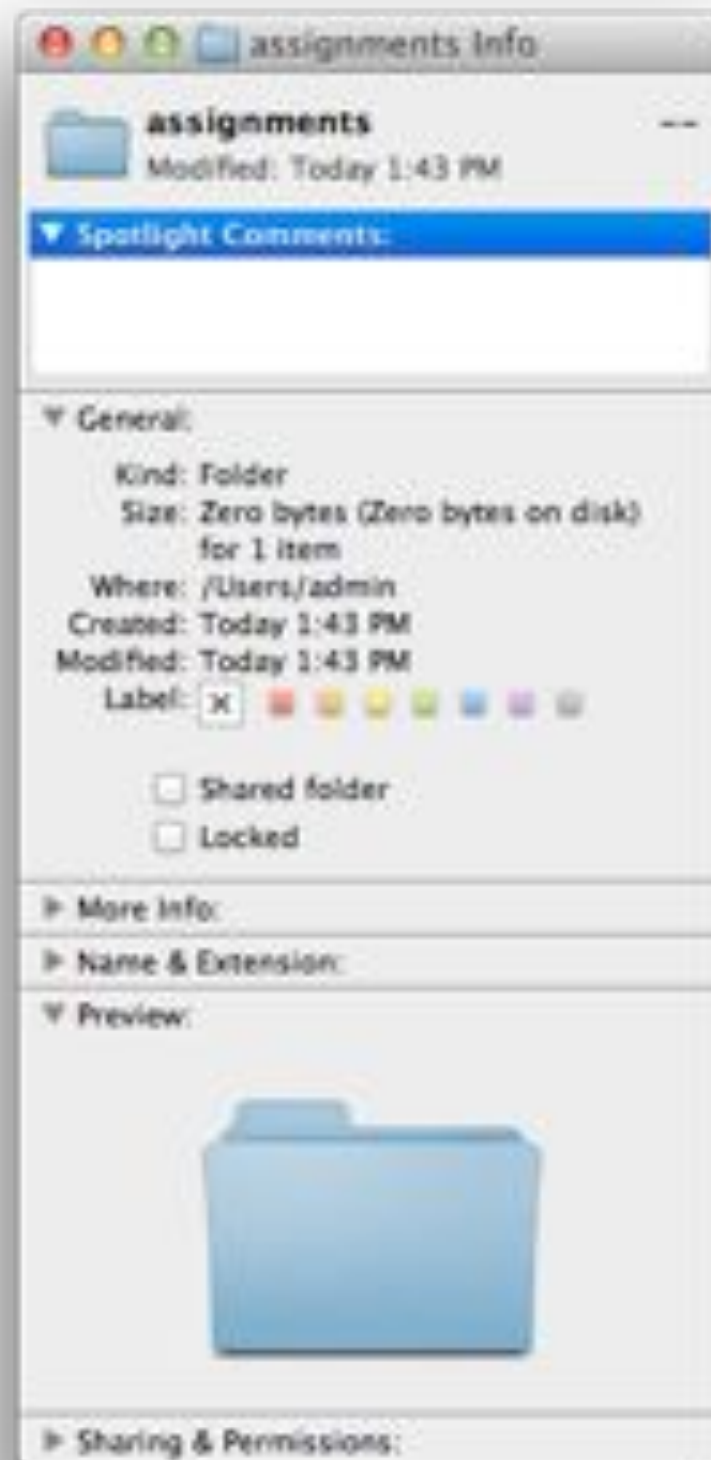


Create a new folder in your home directory. Call it assignments.



Right click the folder and choose Get Info.

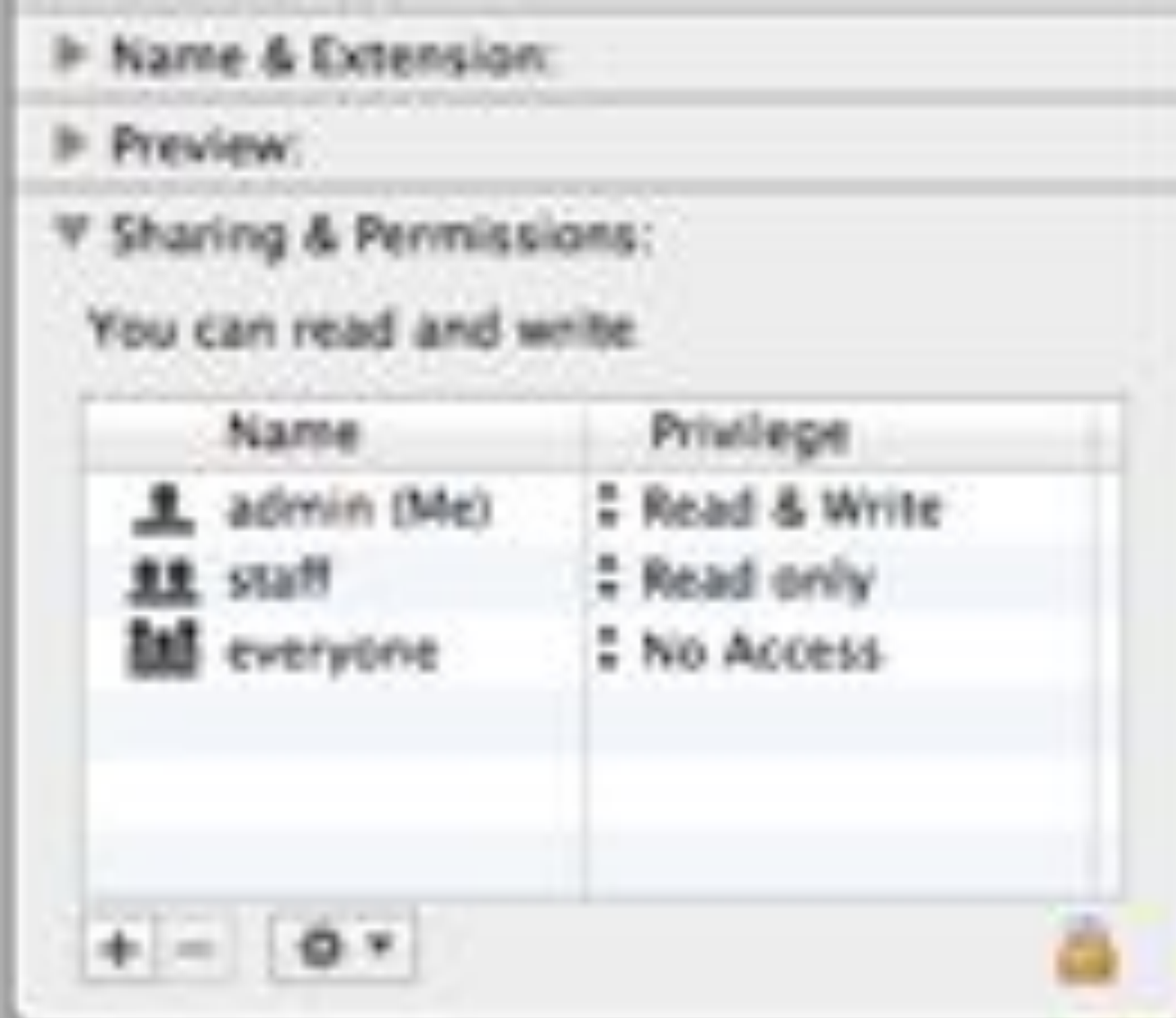




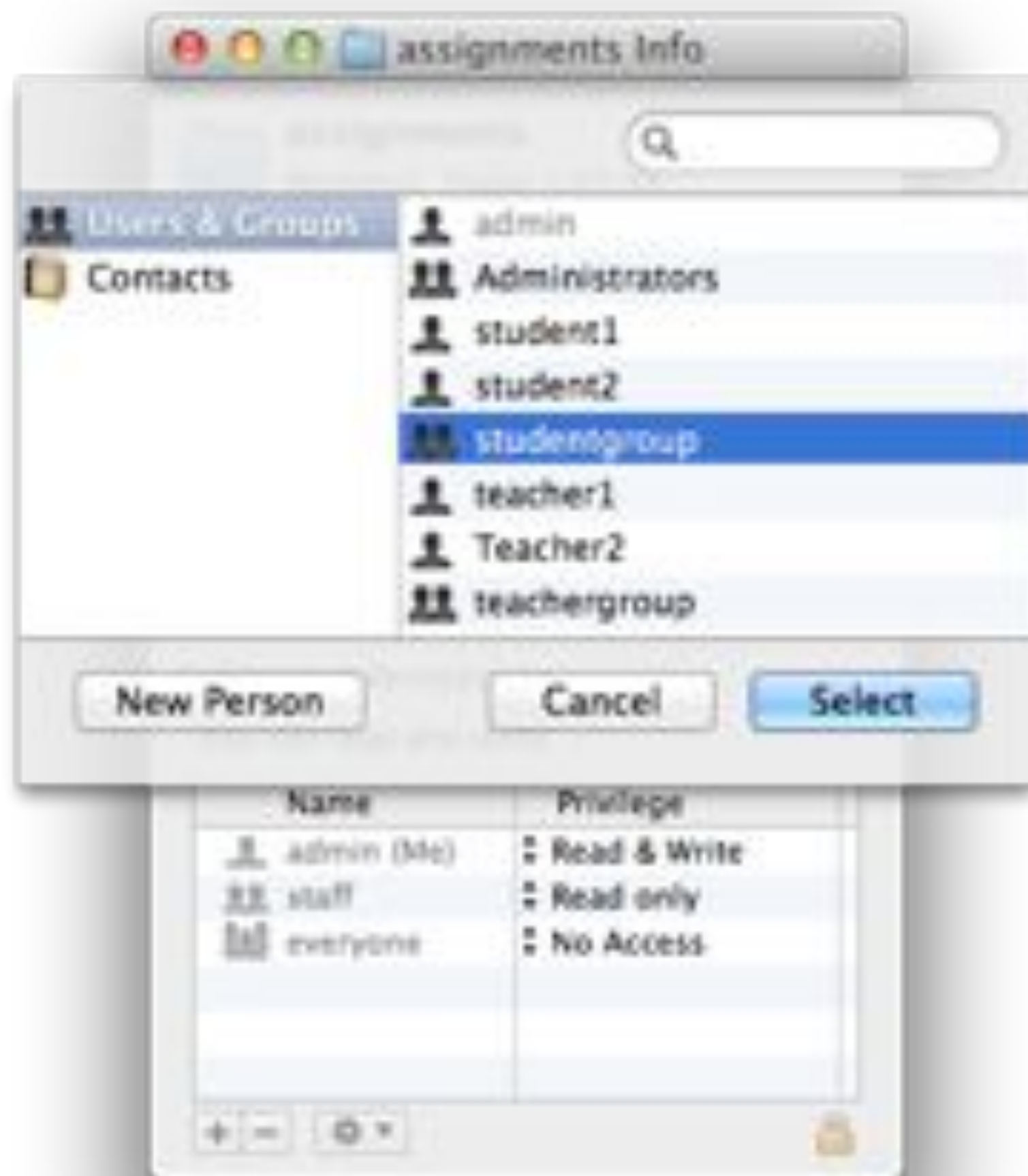
Collapse other sections and expand Sharing & Permissions.



What you see are the standar Unix permissions.  
Owner (admin) – Read & Write  
Group (staff) – Read  
Everyone (not admin and not staff) – Read



Set everyone to No Access.



If you want to set permissions for more than one group, click +. Add the studentgroup and the teachergroup.



We call these additional permissions Access Control Entries (ACE) in an Access Control List (ACL) attached to the item. Set studentgroup to read only.

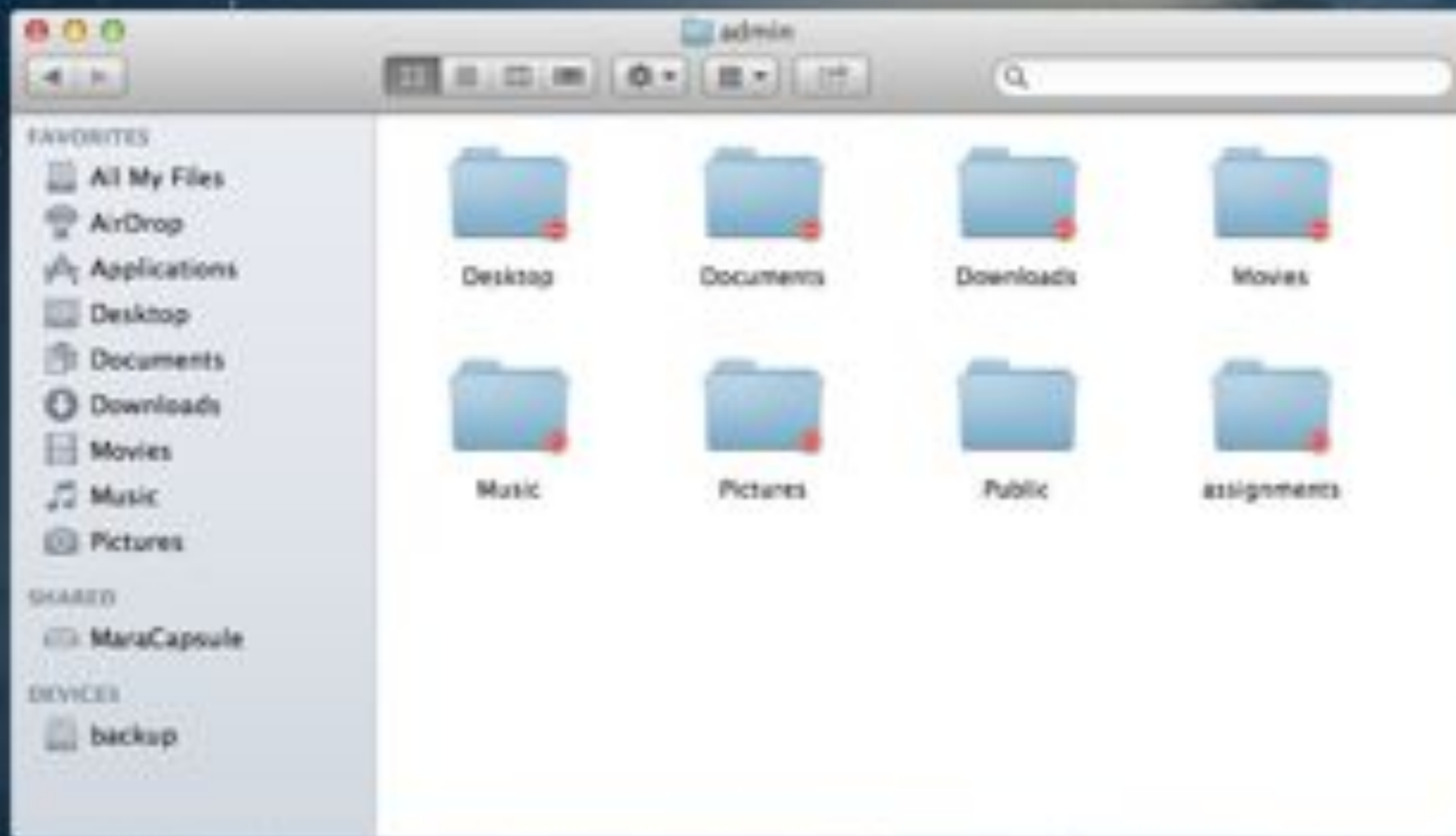




Set teachergroup as Read & Write.



Use Fast User switching to switch to Guest.

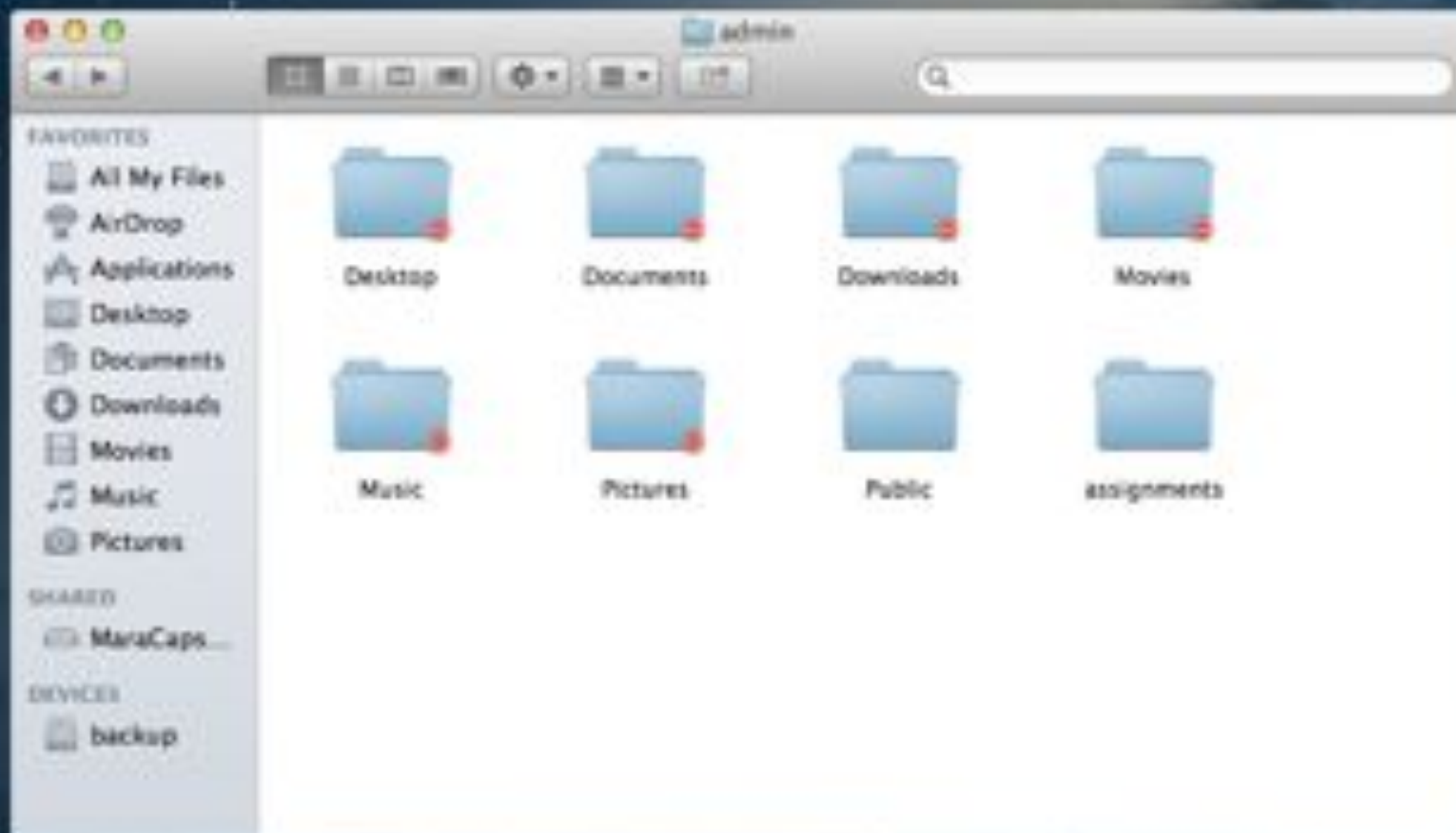


Guest has no access to this folder.



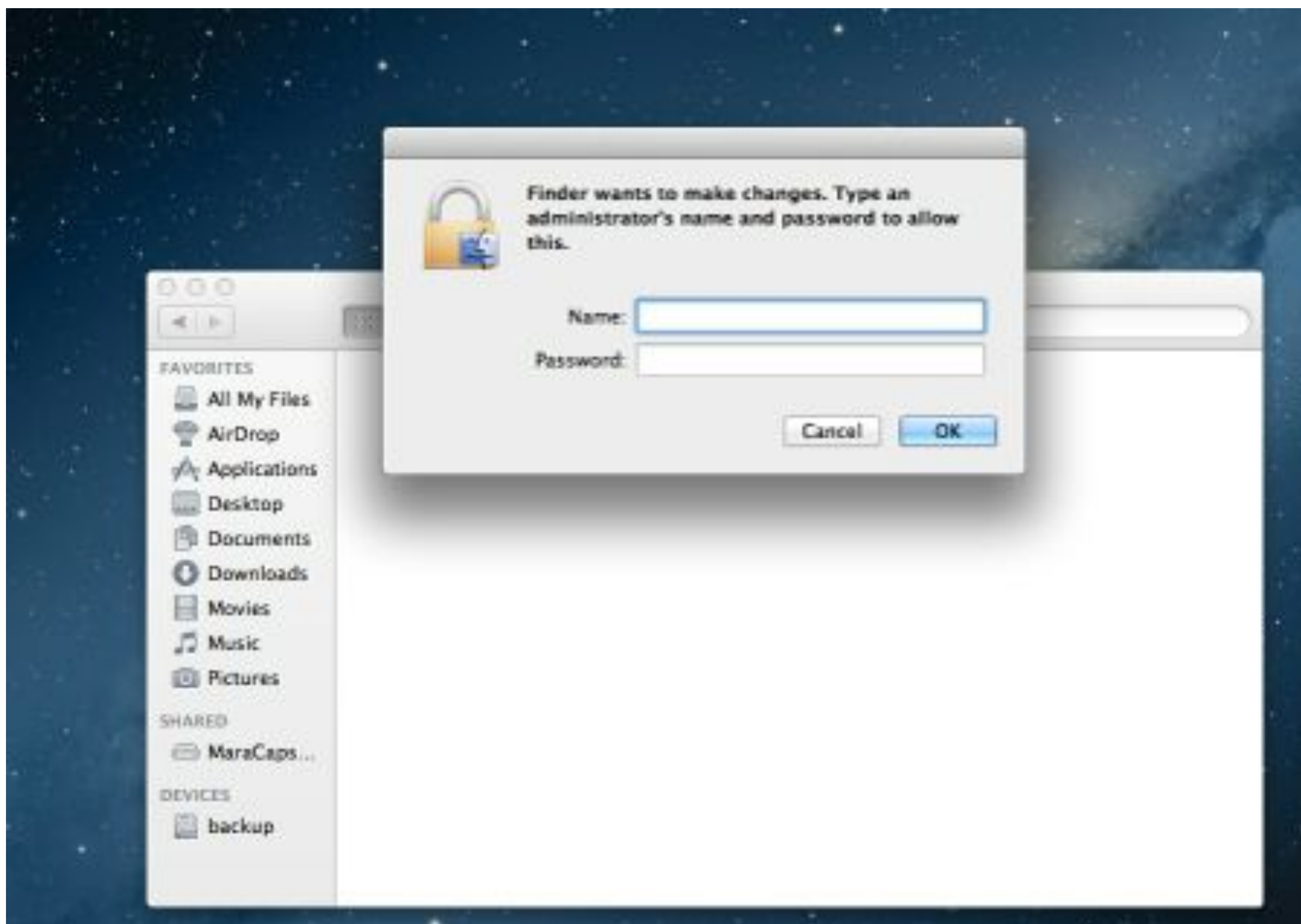
Use Fast User Switching to switch to a user in the studentgroup group.





Student can access this folder.

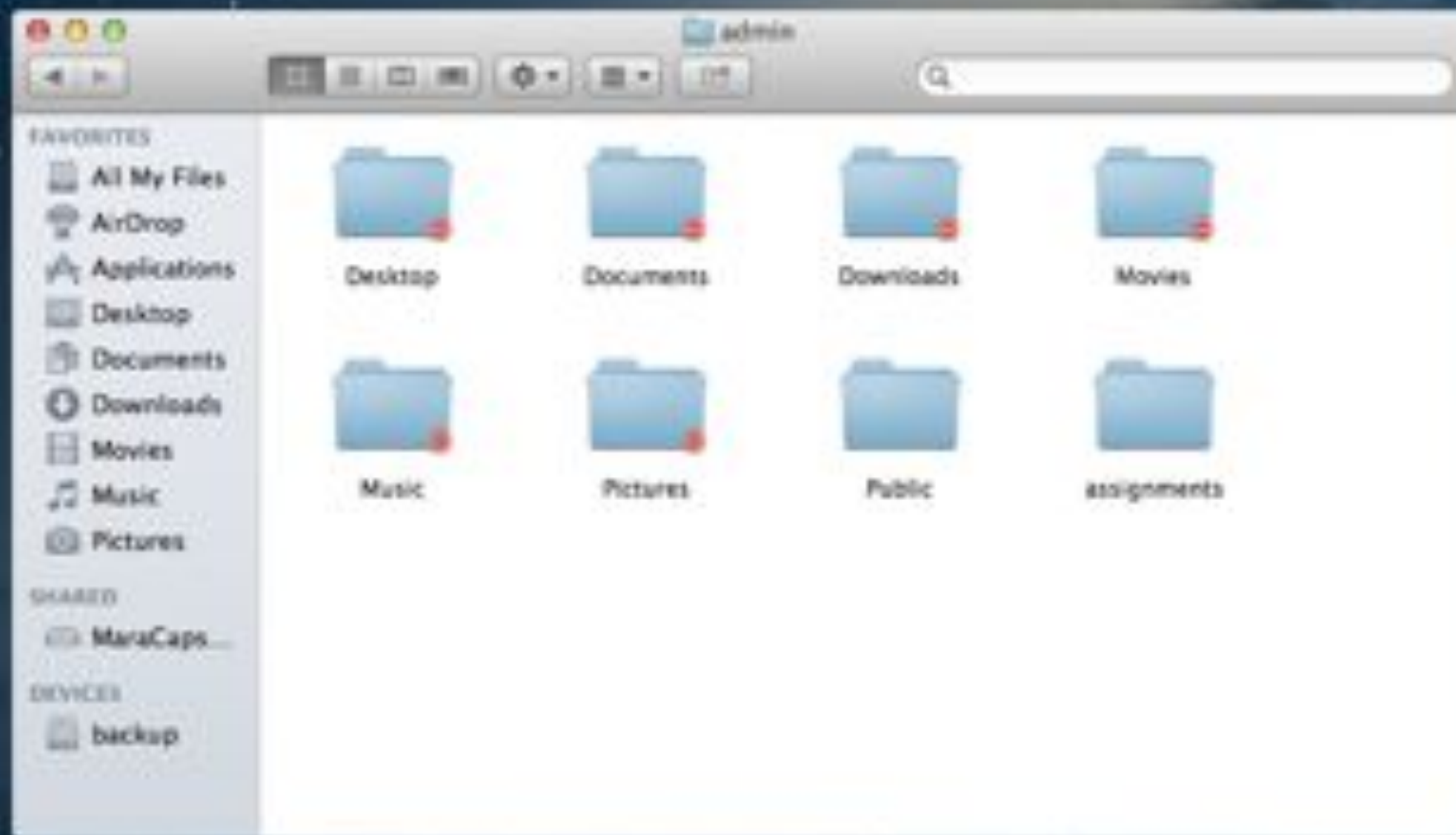




Student cannot write to this folder.

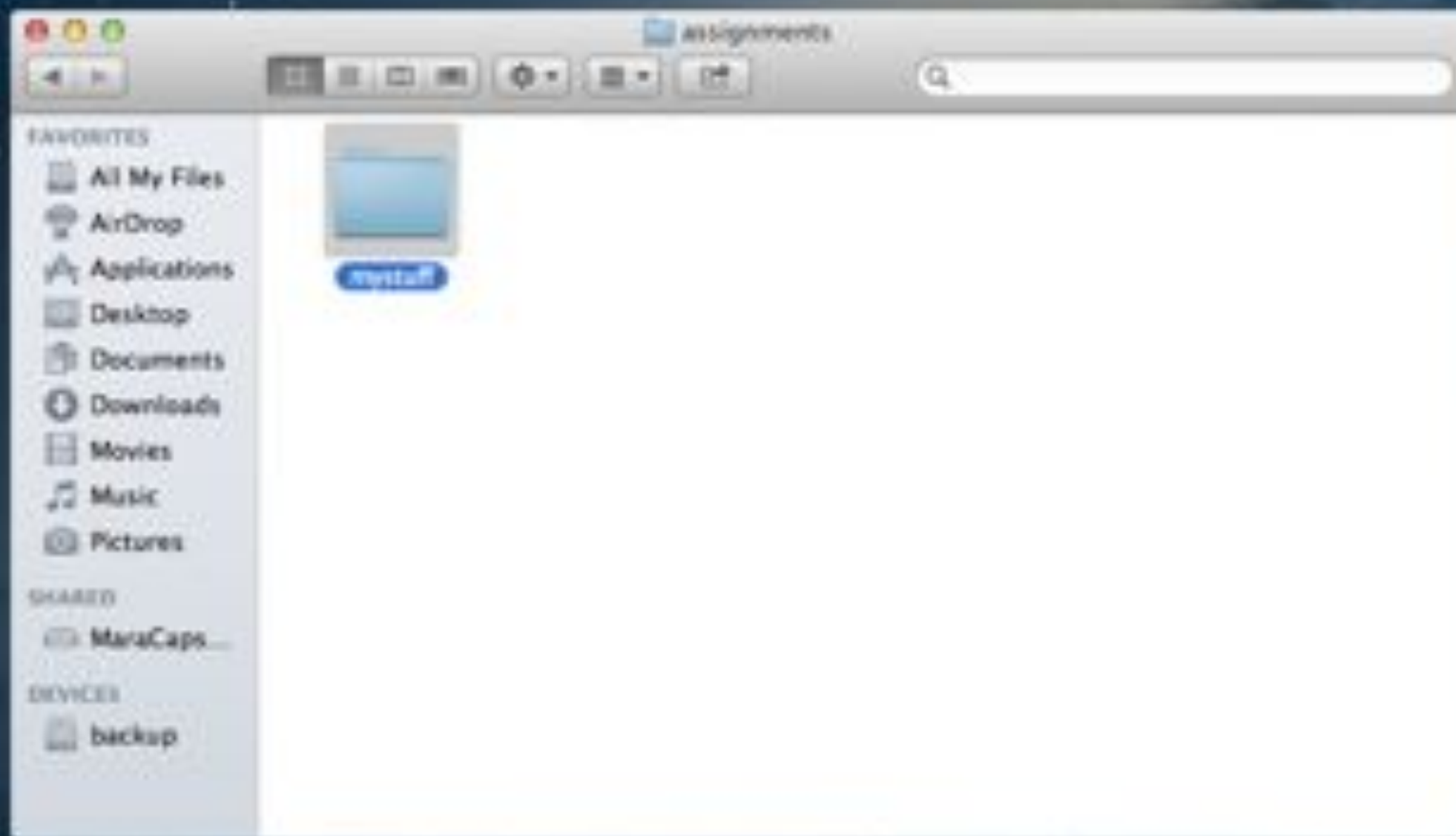


Use Fast User Switching to switch to a user in the teachergroup group.



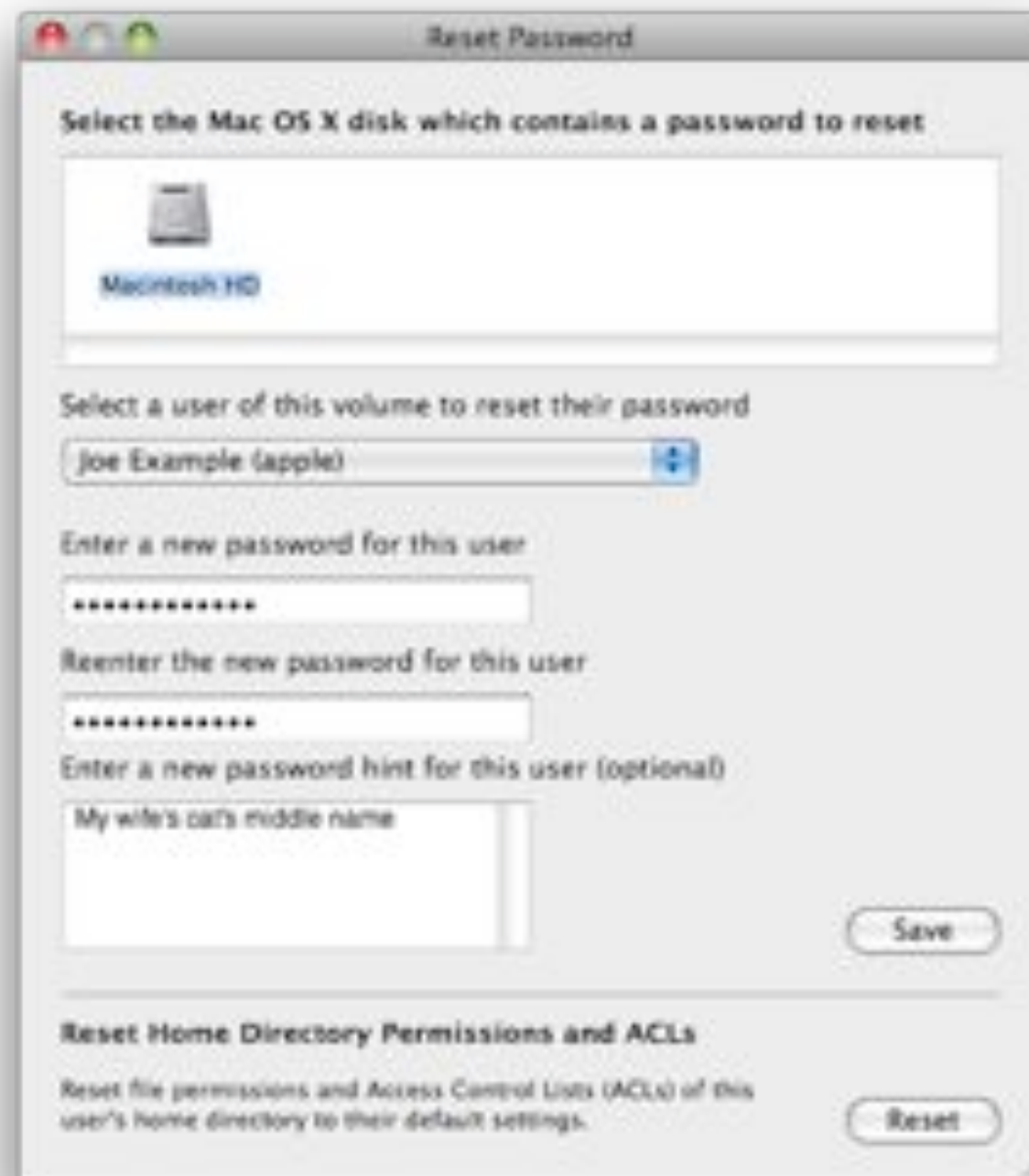
Teacher can access this folder.





Teacher can write to this folder.

# 3.6 Reset home directory permissions



To set the permissions on the home directory back to factory defaults, start up from the Recovery HD, open Terminal, type `resetpassword` and select the Macintosh HD. Choose the account you want and click Reset.



# 4. Data Management & Backup

# 4.1 Volume Hierarchy



Open a new Finder window and choose Go -> Computer. Open Macintosh HD. Macintosh HD is like your C drive.

Applications -> Program Files

Users -> User files

Library and System is the parts that make the computer work.

## 4.2 Resource Types

# Application Support

- ~/Library/Application Support
- /Library/Application Support

In your home and local Library folder. Stuff that's required for applications to work.

# Extensions

- Library/Extensions
- /System/Library/Extensions

In Local and System library folders. System Library has Apple's device drivers. Local Library has third party device drivers.



# Fonts

- ~/Library/Fonts
- /Library/Fonts
- /System/Library/Fonts

In all Library folders.

# Frameworks

- `/Library/Frameworks`
- `/System/Library/Frameworks`

Something like DLLs. System Library has Apple's frameworks and Library has third party frameworks.

# Keychains

- ~/Library/Keychains
- /Library/Keychains
- /System/Library/Keychains

In all Library folders. Home Library has your passwords. Local Library has passwords for all users. System Library has passwords for the system's own use.

# LaunchDaemons (before login)

- /Library/LaunchDaemons
- /System/Library/LaunchDaemons

Programs that run in the background, started up before a user logs in. Root privileges. System Library has Apple's LaunchDaemons and Local Library has third party LaunchDaemons.

# LaunchAgents (after login)

- ~/Library/LaunchAgents
- /Library/LaunchAgents
- /System/Library/LaunchAgents

Programs that run in the background, started up before a user logs in. User privileges. System Library has Apple's LaunchAgents and Local Library has third party LaunchAgents. You can also put it in the user's own Library.



# Logs

- ~/Library/Logs
- /Library/Logs

Shows what's going on in the system. Access Log files using Console.

# Preference Panes

- `~/Library/PreferencePanels`
- `/Library/PreferencePanels`
- `/System/Library/PreferencePanels`

Appears in System Preferences. Apple's PreferencePanels are in System Library. Third party PreferencePanels are in the other Library folders.

# Preferences

- ~/Library/Preferences
- /Library/Preferences

Program settings. Your settings are in your own Library folder. Systemwide settings are in Local Library.

# Startup items

- `/Library/StartupItems`
- `/System/Library/StartupItems`

Only kept for Legacy purposes. Use not recommended.

# 4.3 Hierarchy

- User
- Local
- Network
- System

When the OS wants a resource it will look for it in the following order. Network is only if you're bound to a central directory like OD or AD.



# 4.4 Resource and Data Fork



When you copy a Mac file into a FAT32 thumbdrive, it will split into resource and data forks. Resource fork will add `._` to the file name. When opening the file on a Windows machine, just need to open the data fork.

# 4.5 Hidden items

- Use a . in the filename (eg .mysecret)
- chflags file property
- use Terminal to view hidden files (ls -la)

To hide a file on the Mac, use . in the filename or change the chflags property. You can only do this using the command line in Terminal. You can also use Terminal to view hidden files.

# 4.6 Launch Services settings



If you want a specific program to open files, right click on a file and choose Get Info. Choose Open With and set the specific program there. Click Change all to make all files of that type open in that specific program.

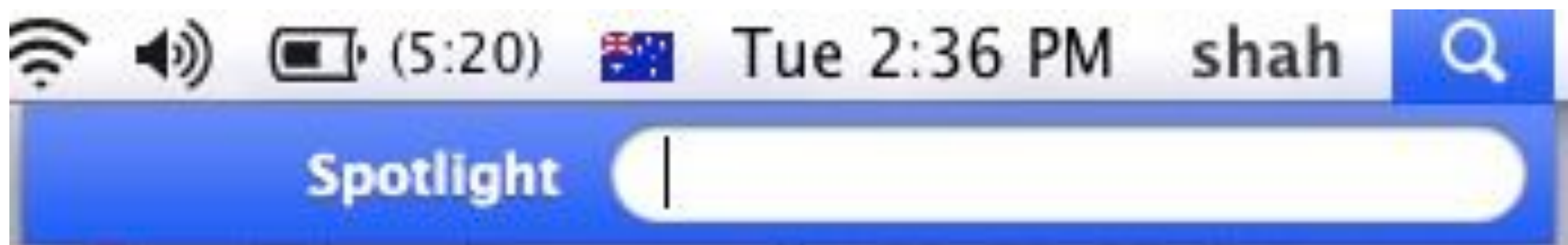
# 4.7 Quicklook



To preview any file, click it and press the space bar to preview.

## 4.8 Spotlight

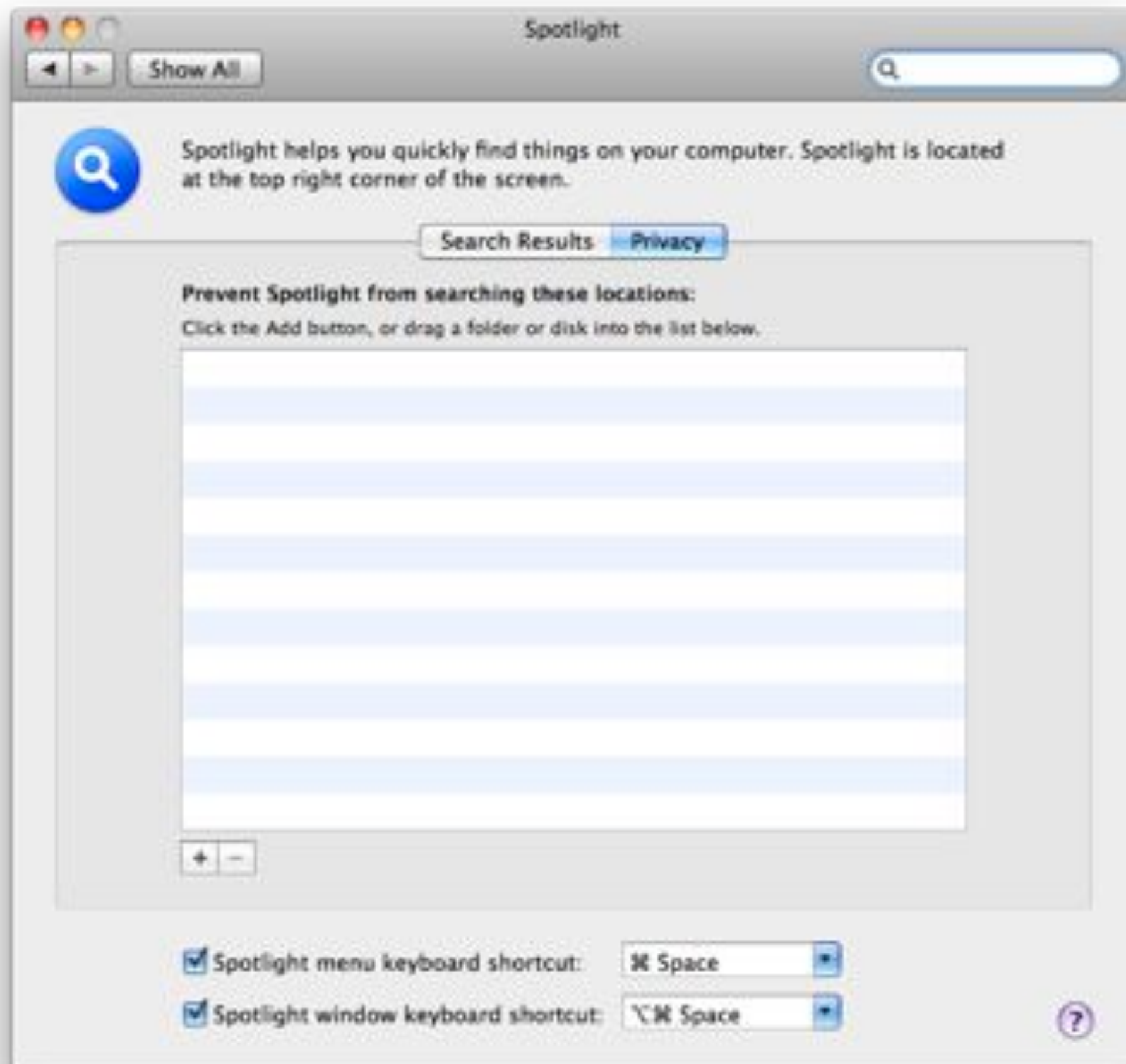




To search for any file, press Command-Space and type in what you wish to find.

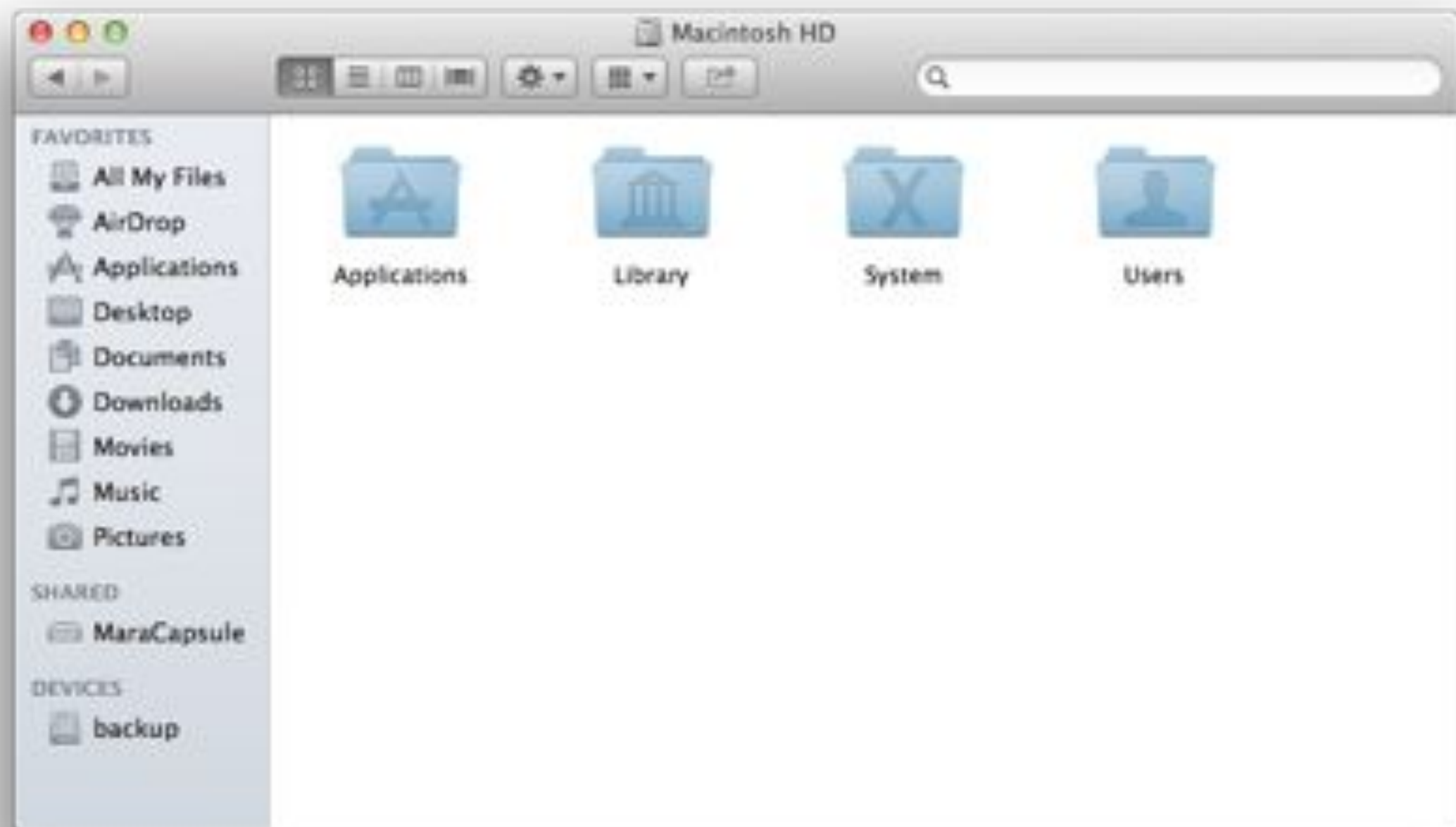


You can disable the various plugins to limit the search results.



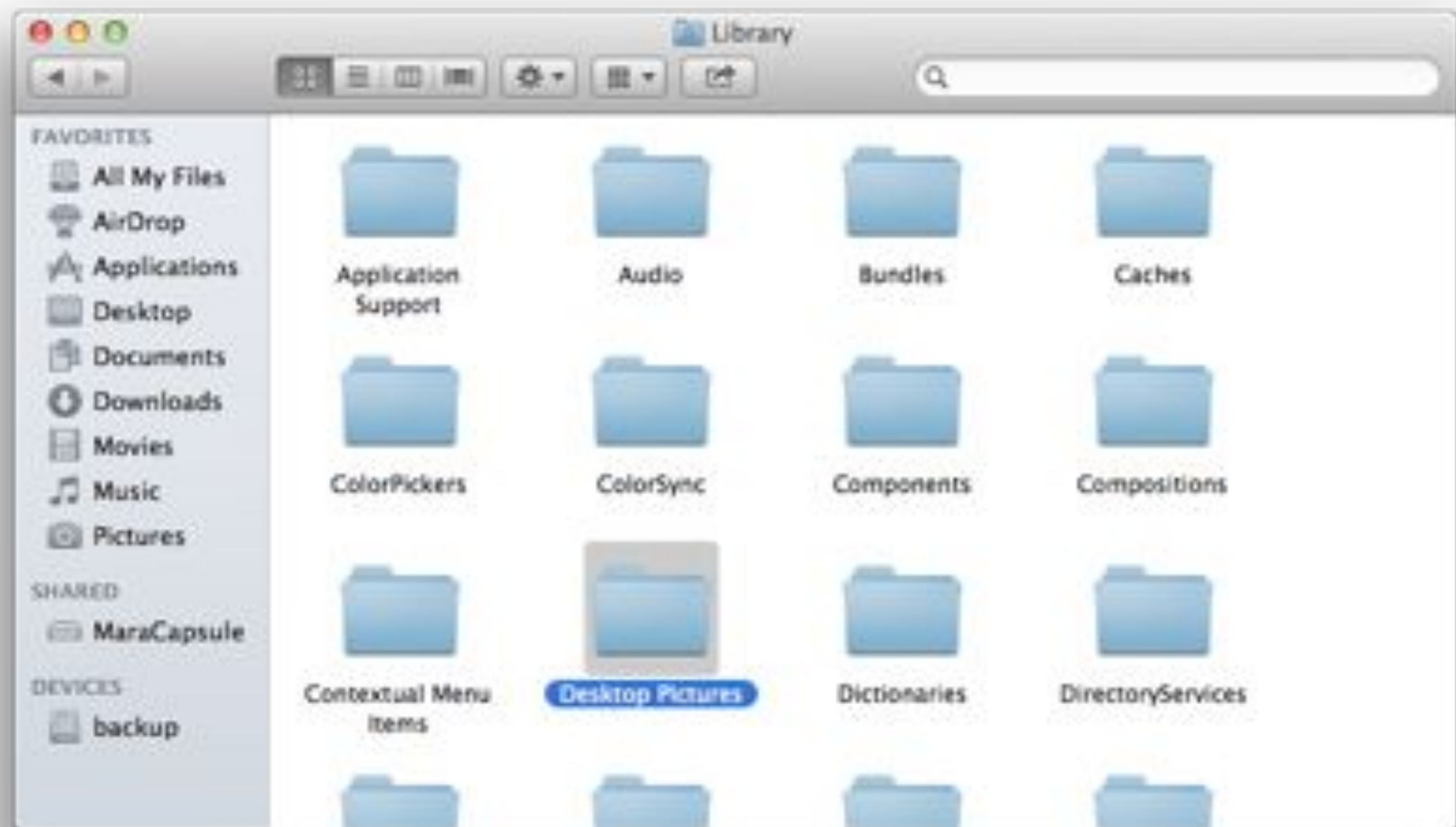
Use the privacy tab to prevent Spotlight from searching that location.

## 4.9 ZIP archive



You can compress files using Zip compression. Open Macintosh HD -> Library.





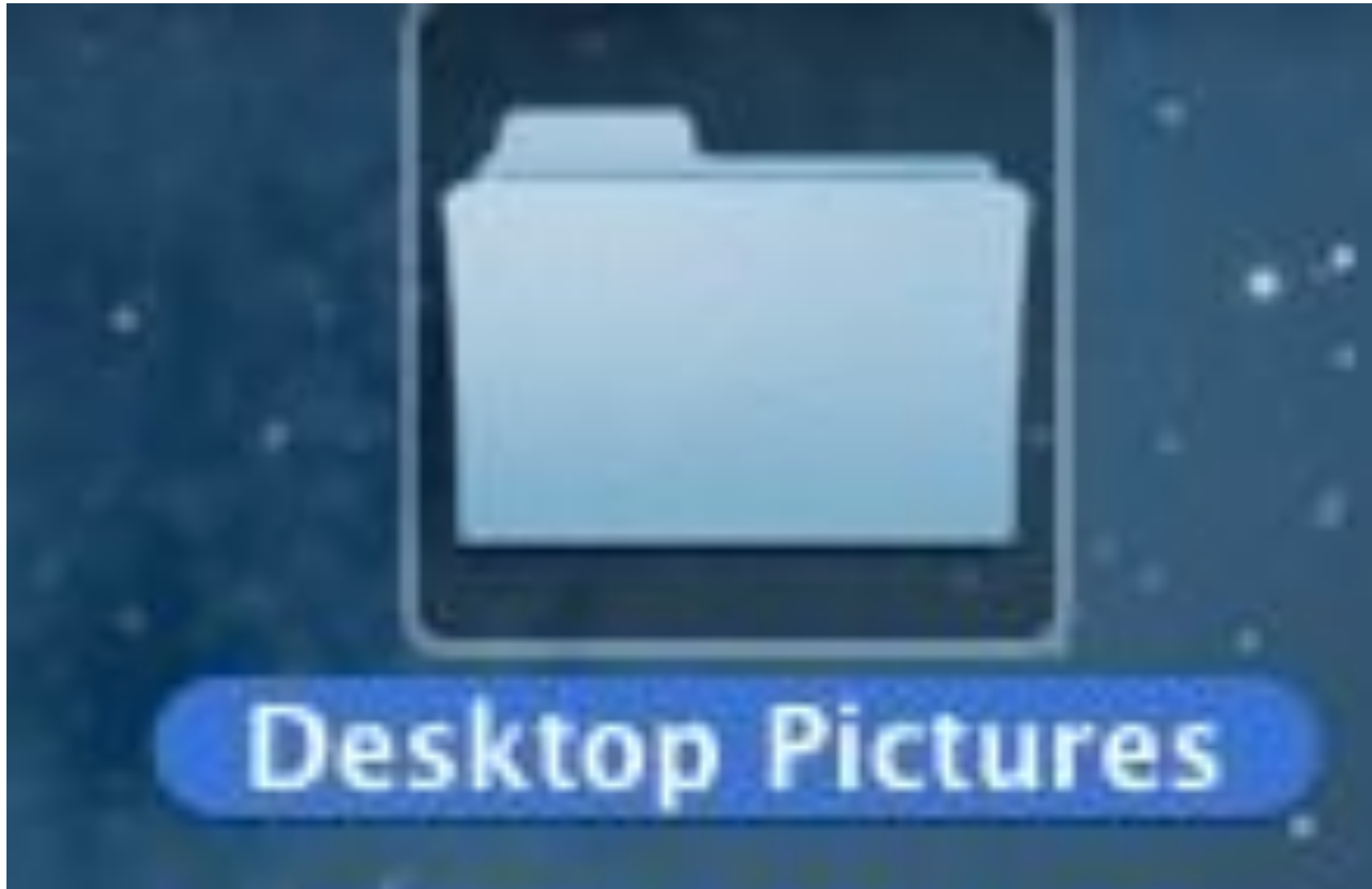
Click Desktop Pictures.



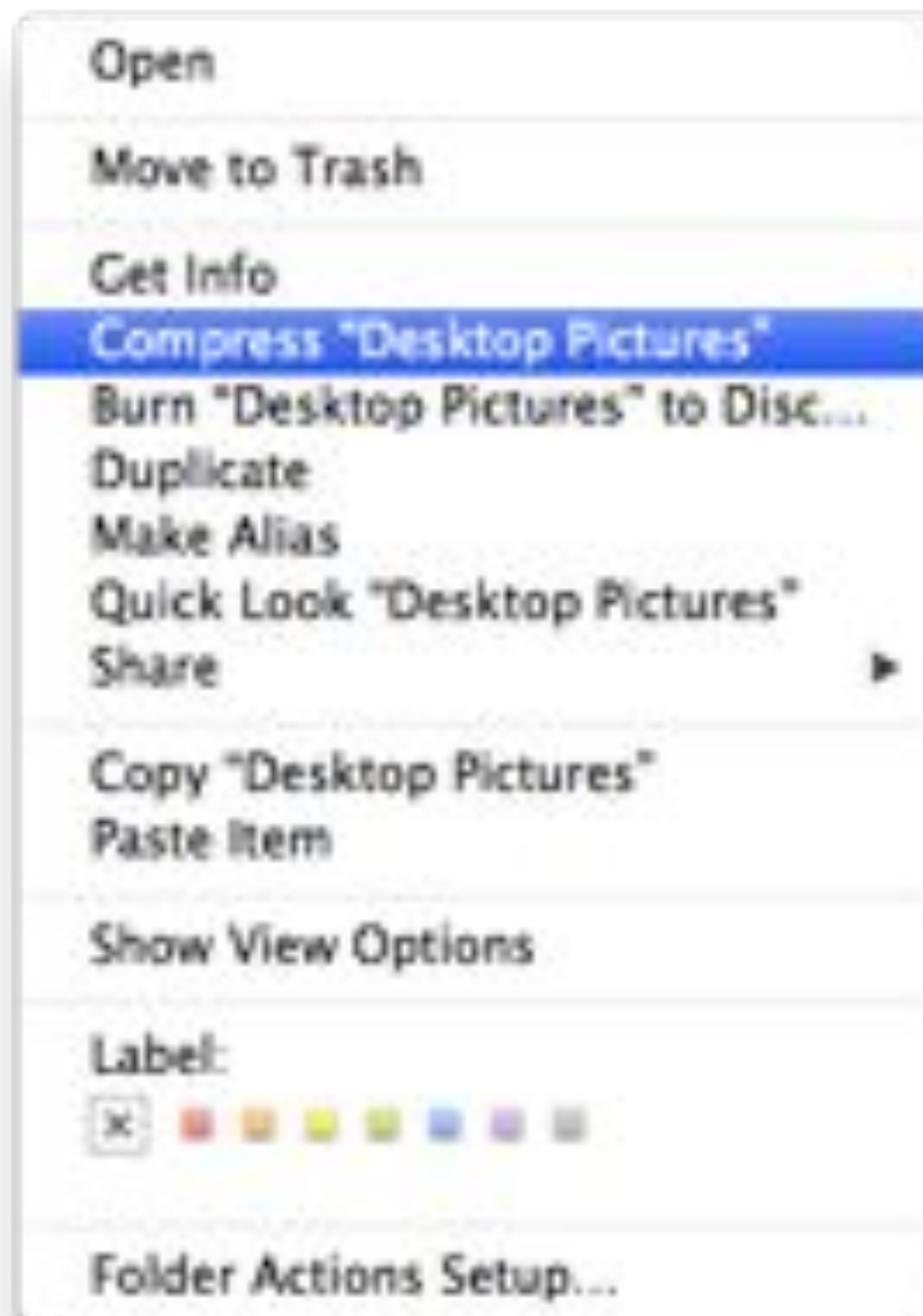
Right click Desktop Pictures and choose Copy.



Right click your Desktop and choose Paste.



Right click the Desktop Pictures on your Desktop.



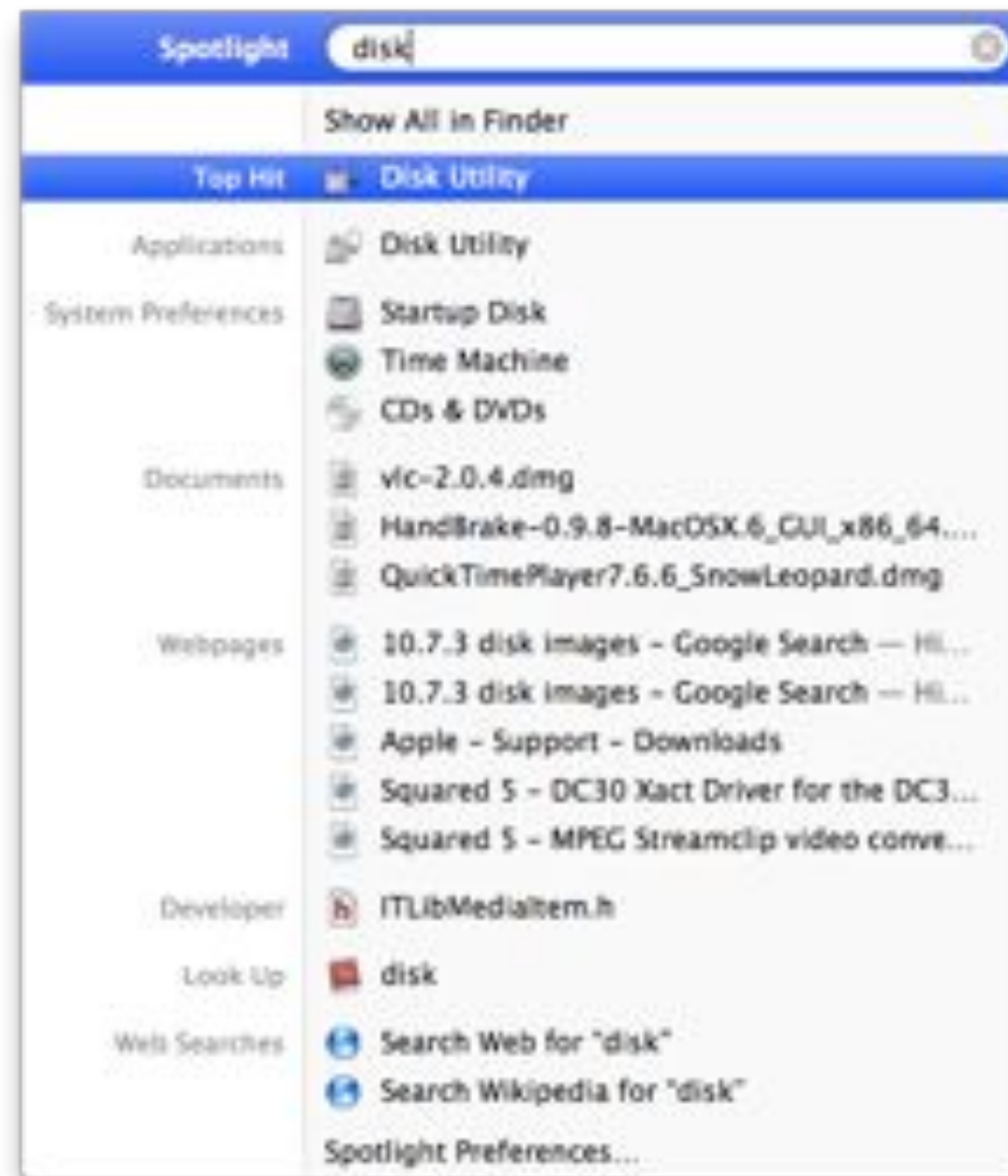
Choose Compress.



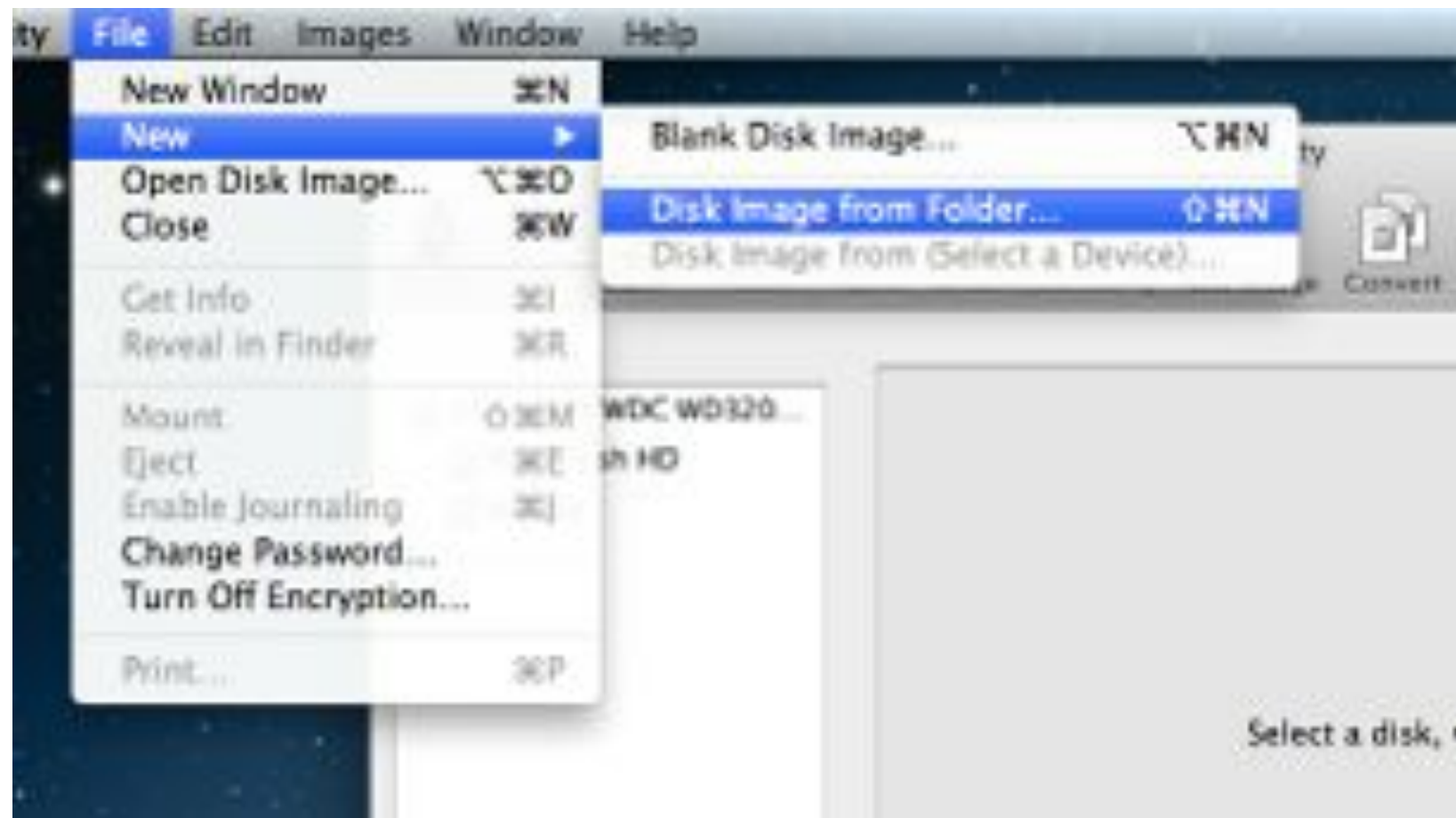


A zip file will be created.

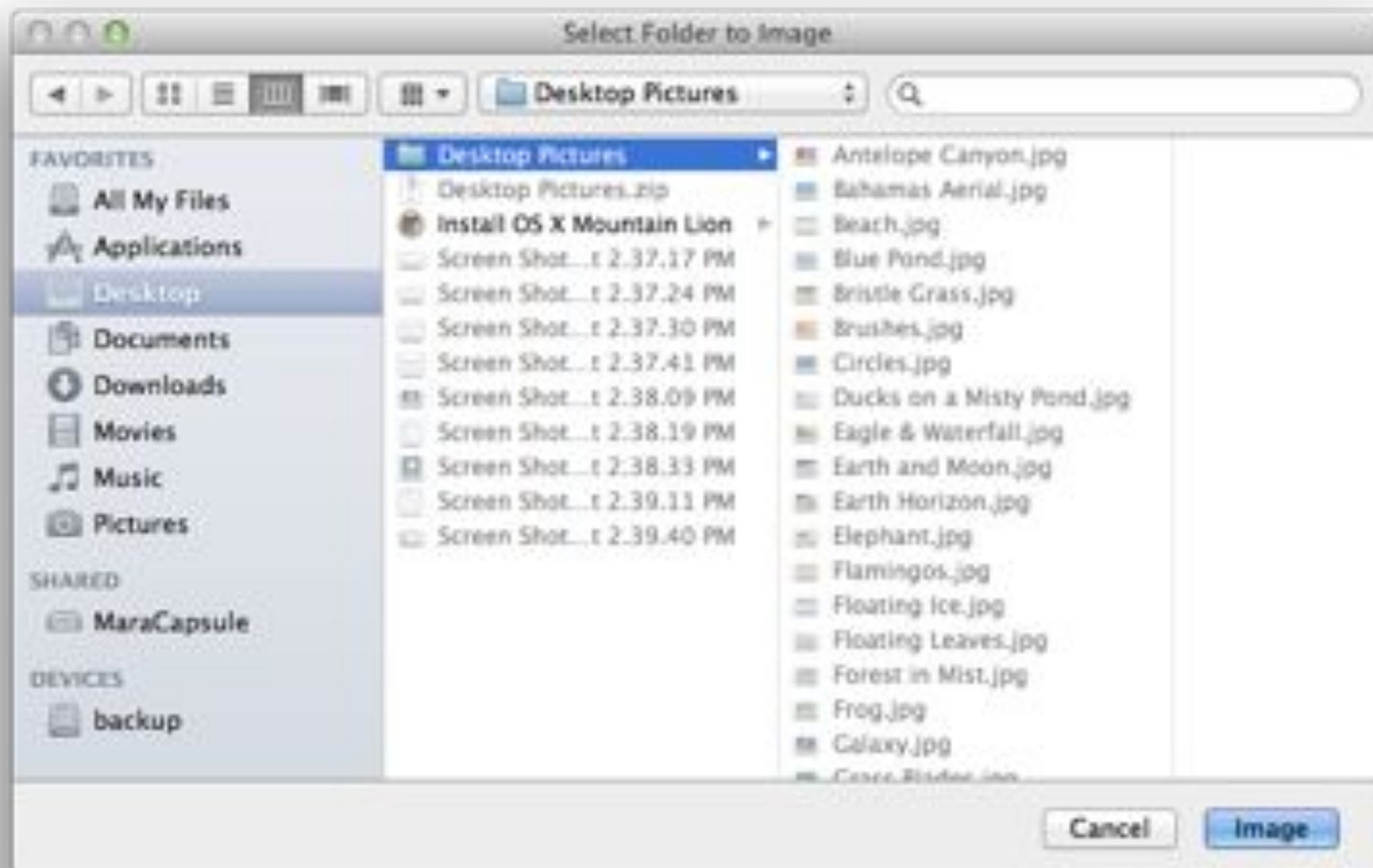
## 4.10 Disk Images



You can also create Disk Images using Disk Utility. Search for Disk Utility.

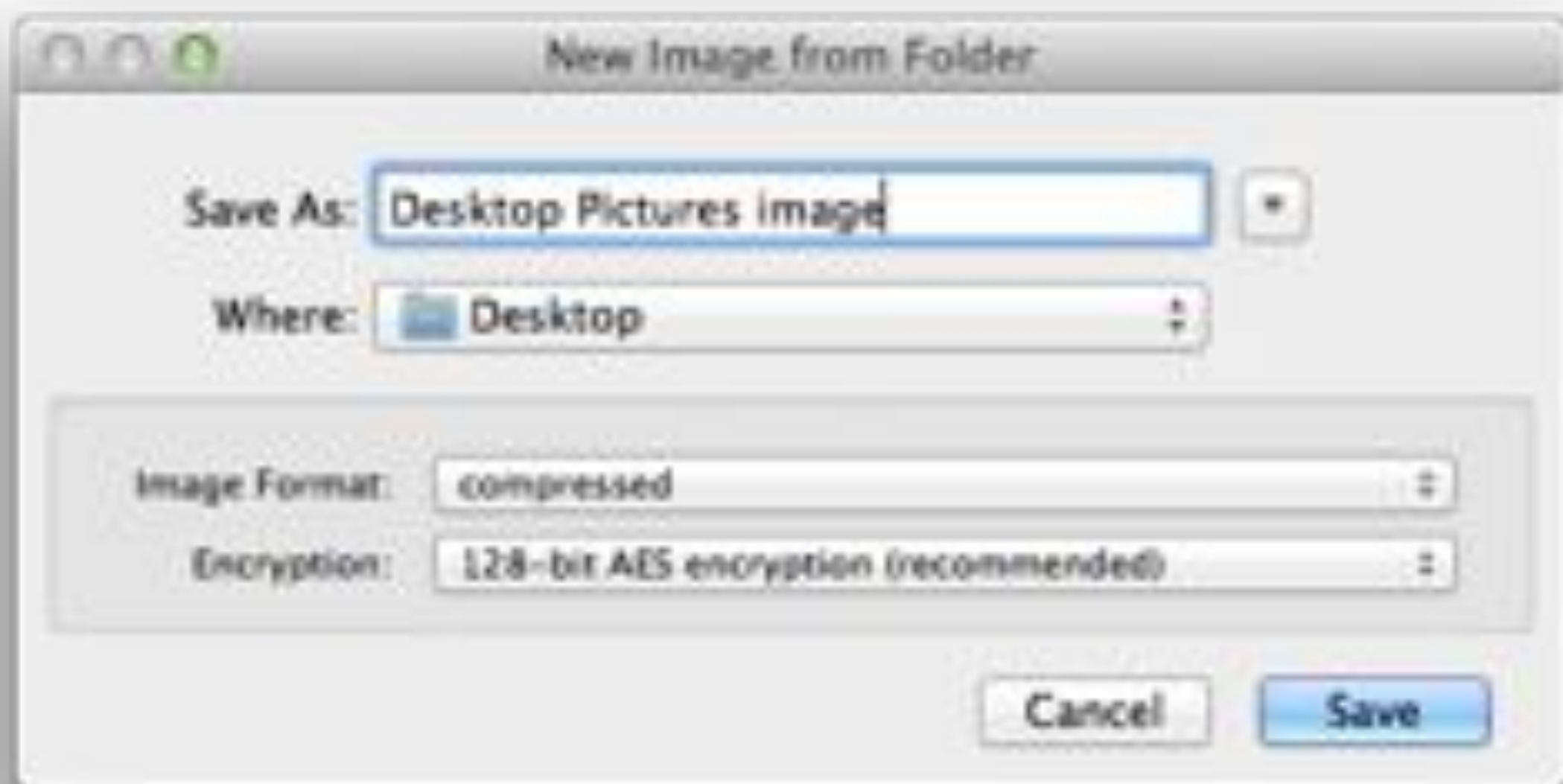


In Disk Utility choose File -> New -> Disk Image from Folder...



Choose a folder and click Image.





Set encryption. Change the name of the image. Click Save.



Put in the password when requested. Don't tick Remember password in my keychain.



Here you can see the image on your desktop. Double click it.



Key in the password. Click OK.



The contents of the image are displayed.



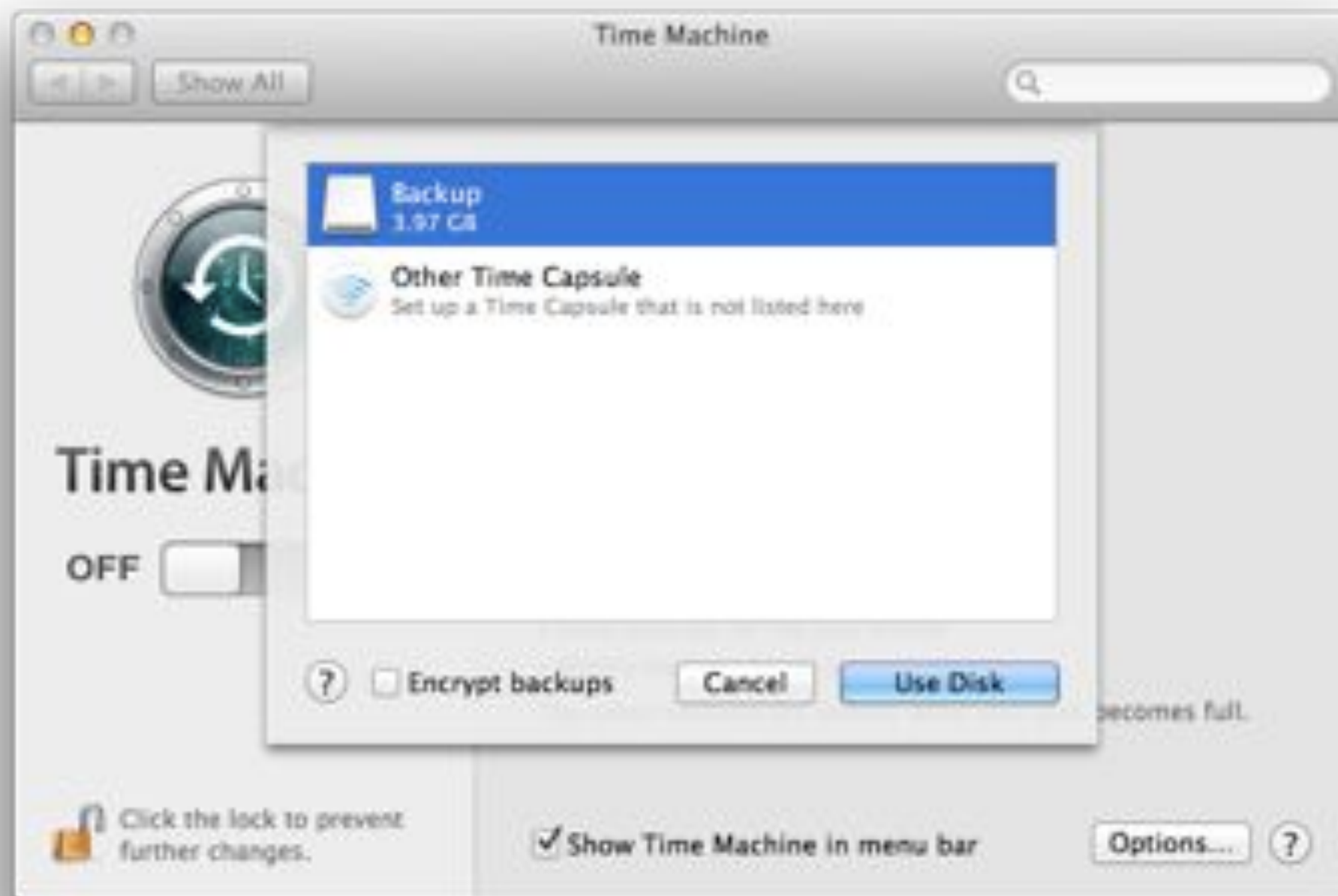


If you don't want to use the image any more, eject it.

# 4.11 Time Machine



It is best to use Time Machine with an external disk, but for the purpose of demonstration we will just back up to the Backup volume we created earlier on the thumbdrive. Go to System Preferences -> Time Machine. Click Select Backup Disk...  
**WARNING:** Do not partition your internal hard disk if you have Boot Camp installed as this will disable Boot Camp.



Click Backup. Click Use Disk.

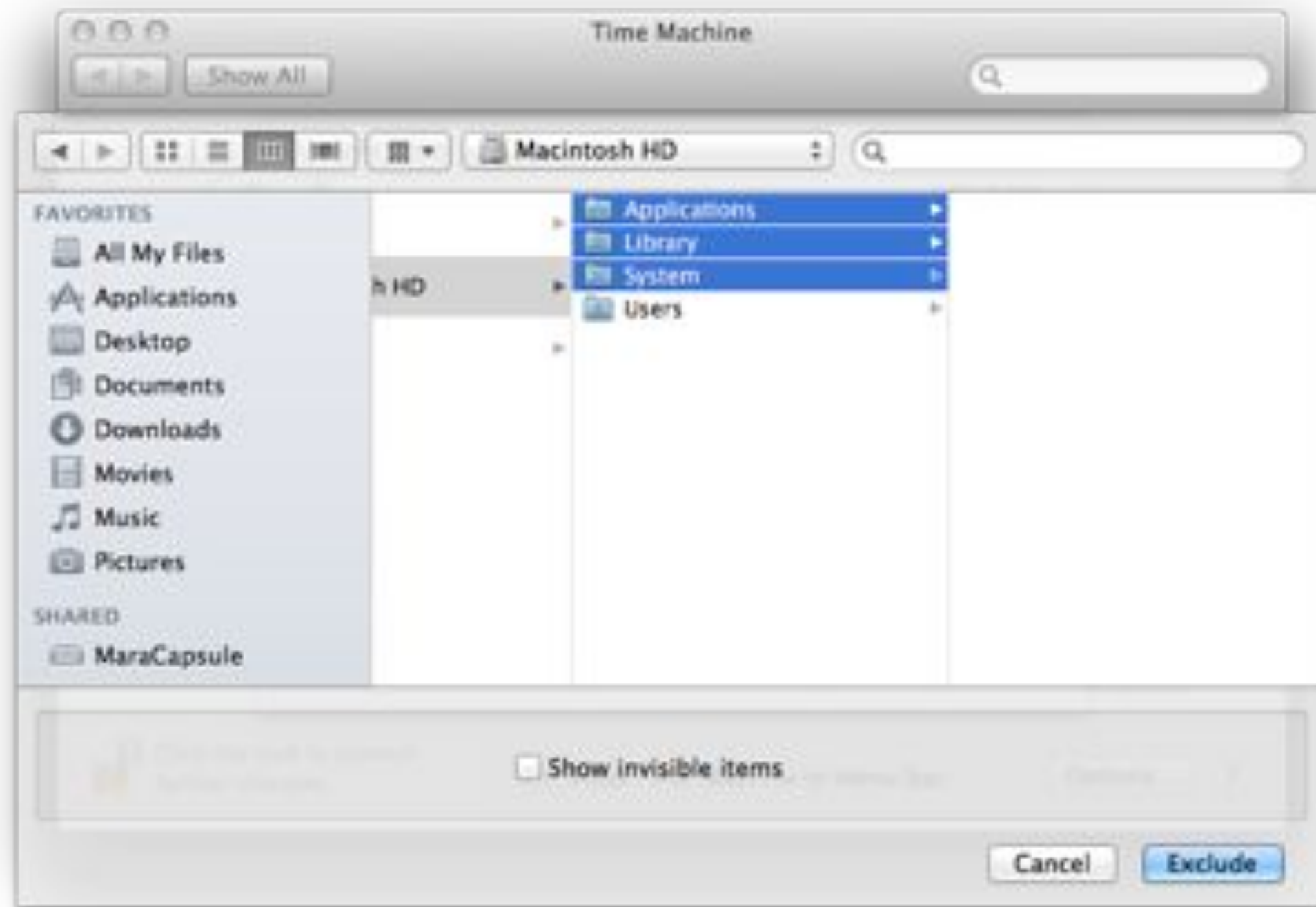


Time Machine on and choose Options.





To save time, we're going to exclude some things from the backup. Click +. It is recommended that you do NOT exclude the items if you're doing this for real.



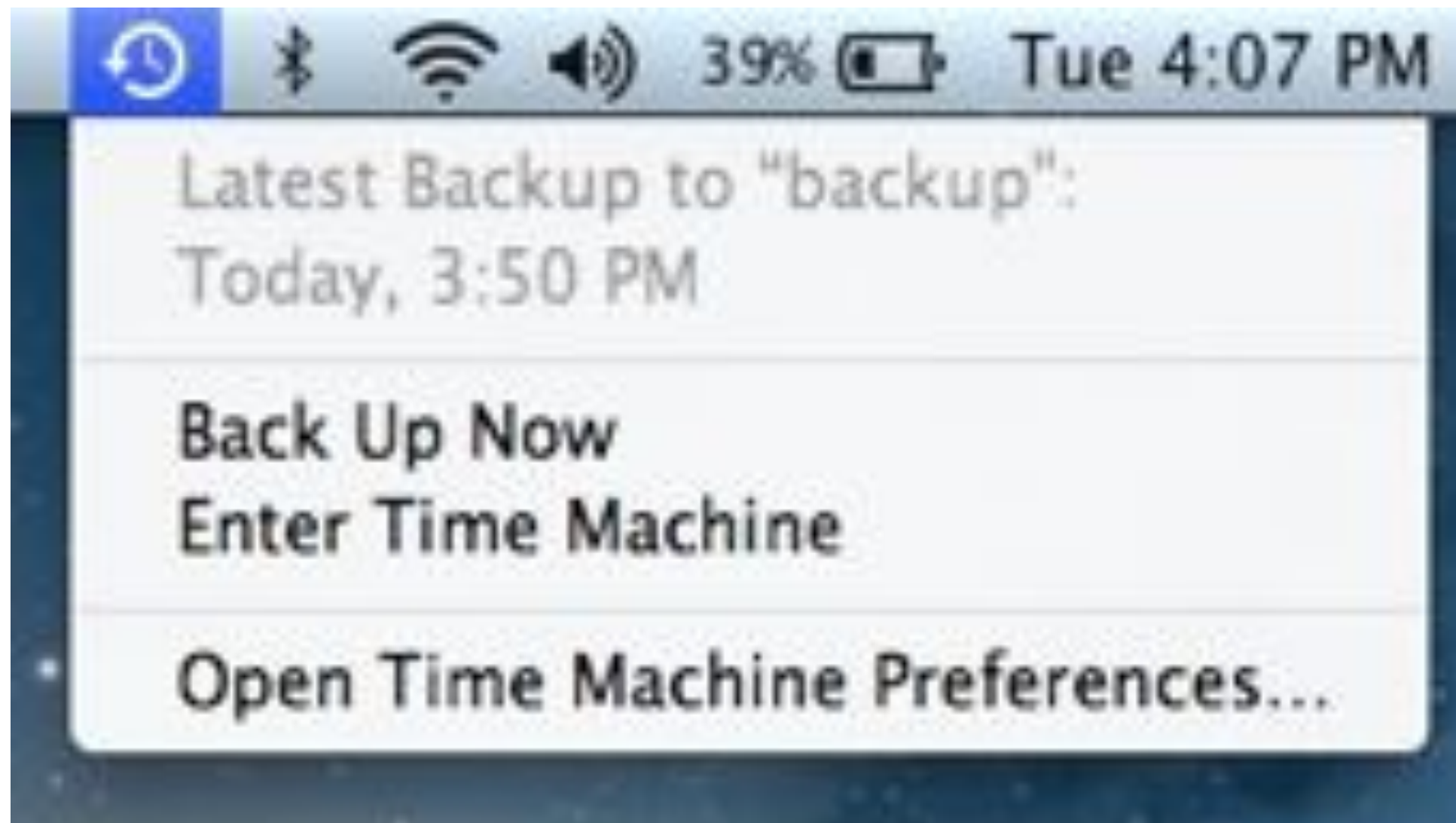
Choose Macintosh HD from the pop up menu and select Application, Library and System. Click Exclude.



Click Exclude All System Files.

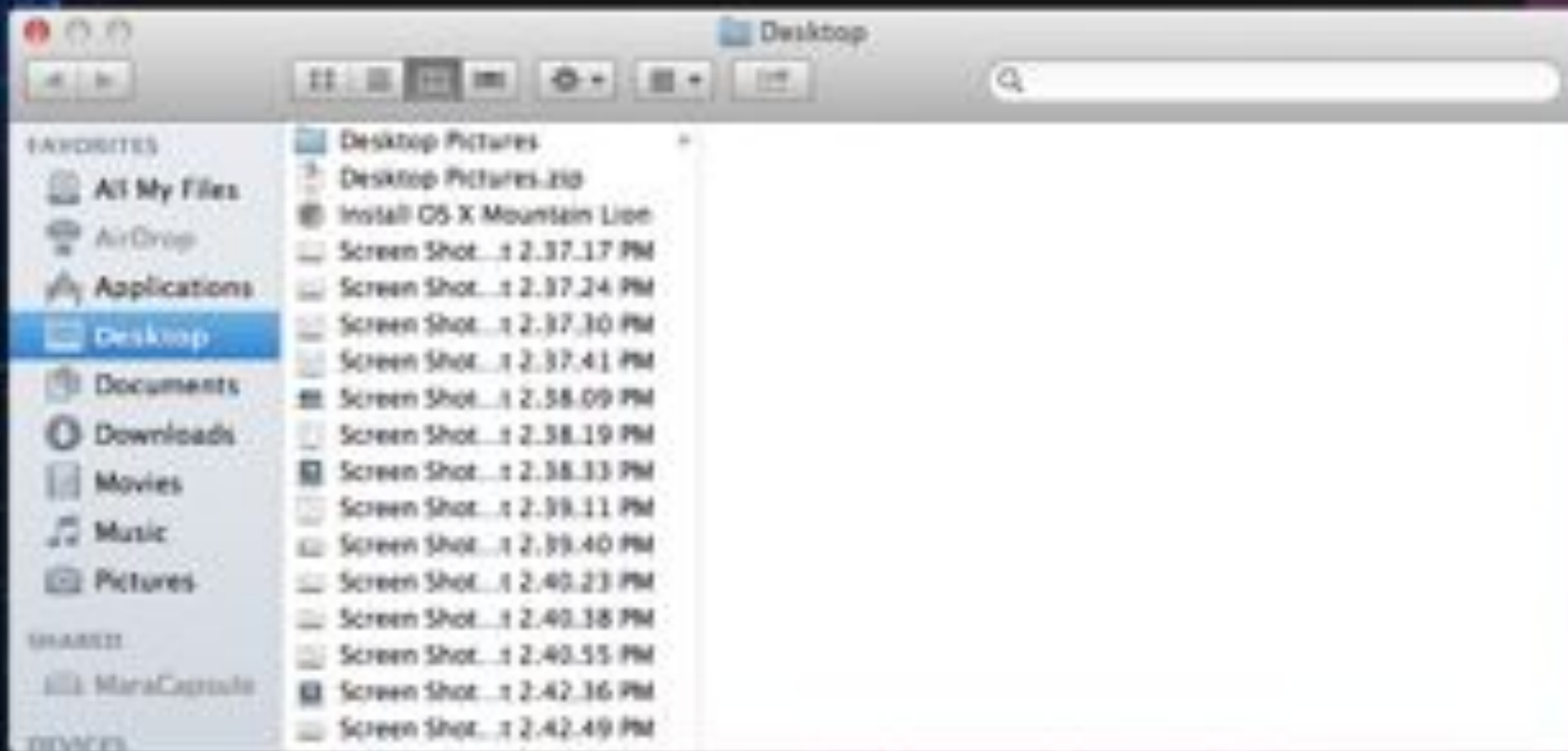


Click Save.



To recover items, choose Enter Time Machine from the Time Machine menu.



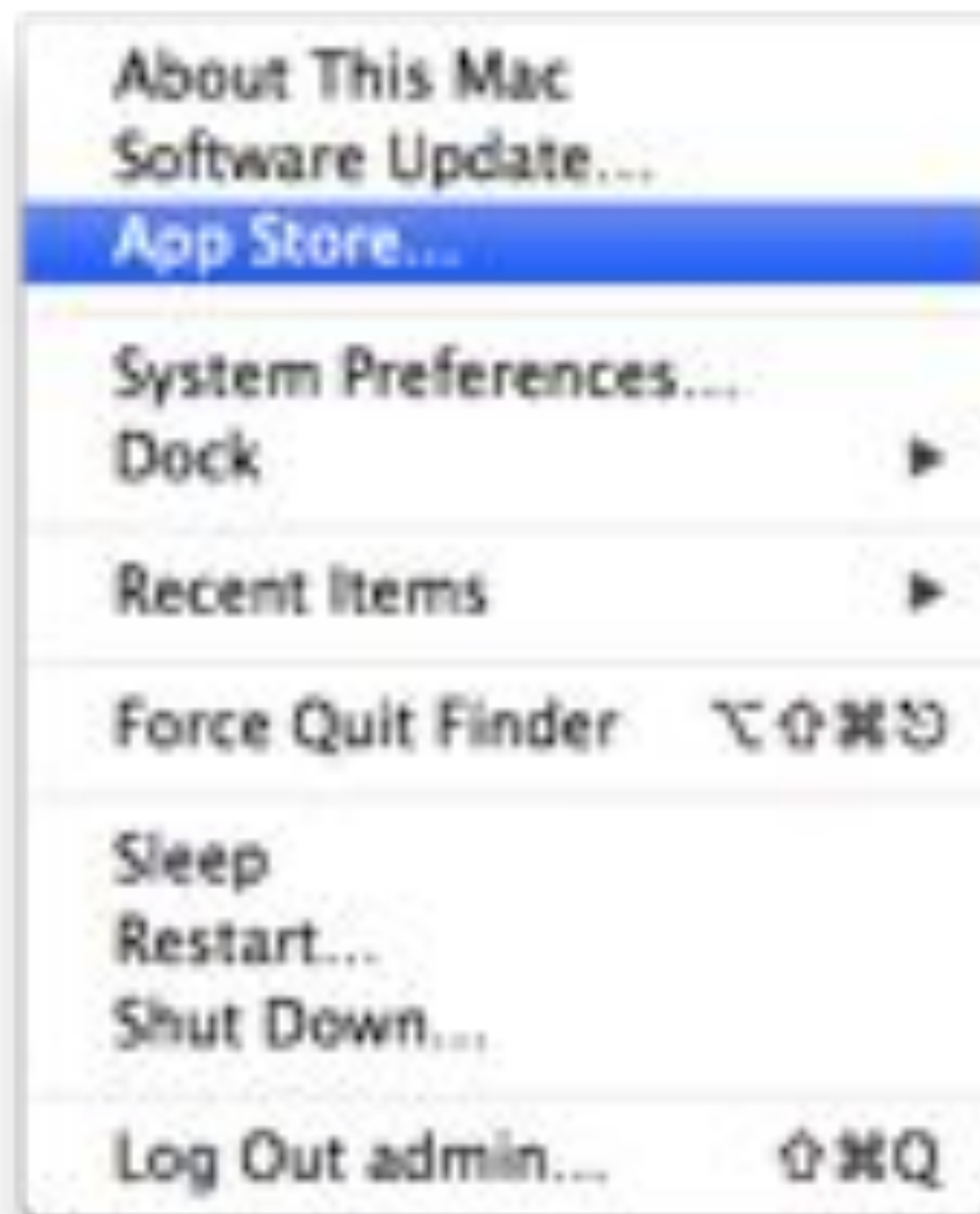


Use the arrows to go back in time. Click Restore to recover the item.



# 5. Application and Boot Camp

# 5.1 Installation



There are three ways to get Mac programs. The first way is the App Store. Choose App Store... from the Apple menu.

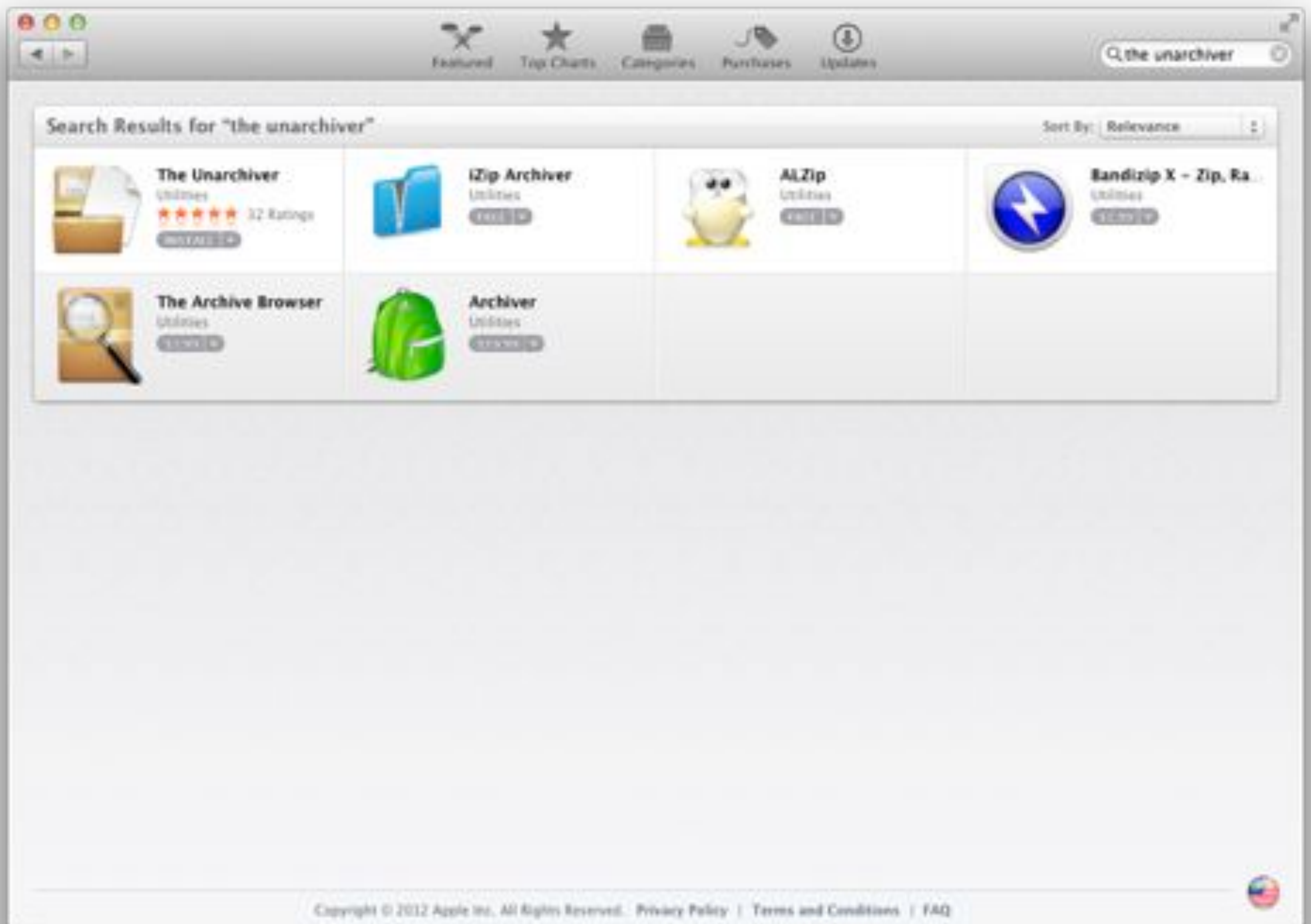


We're going to look for an app that expands .rar files.



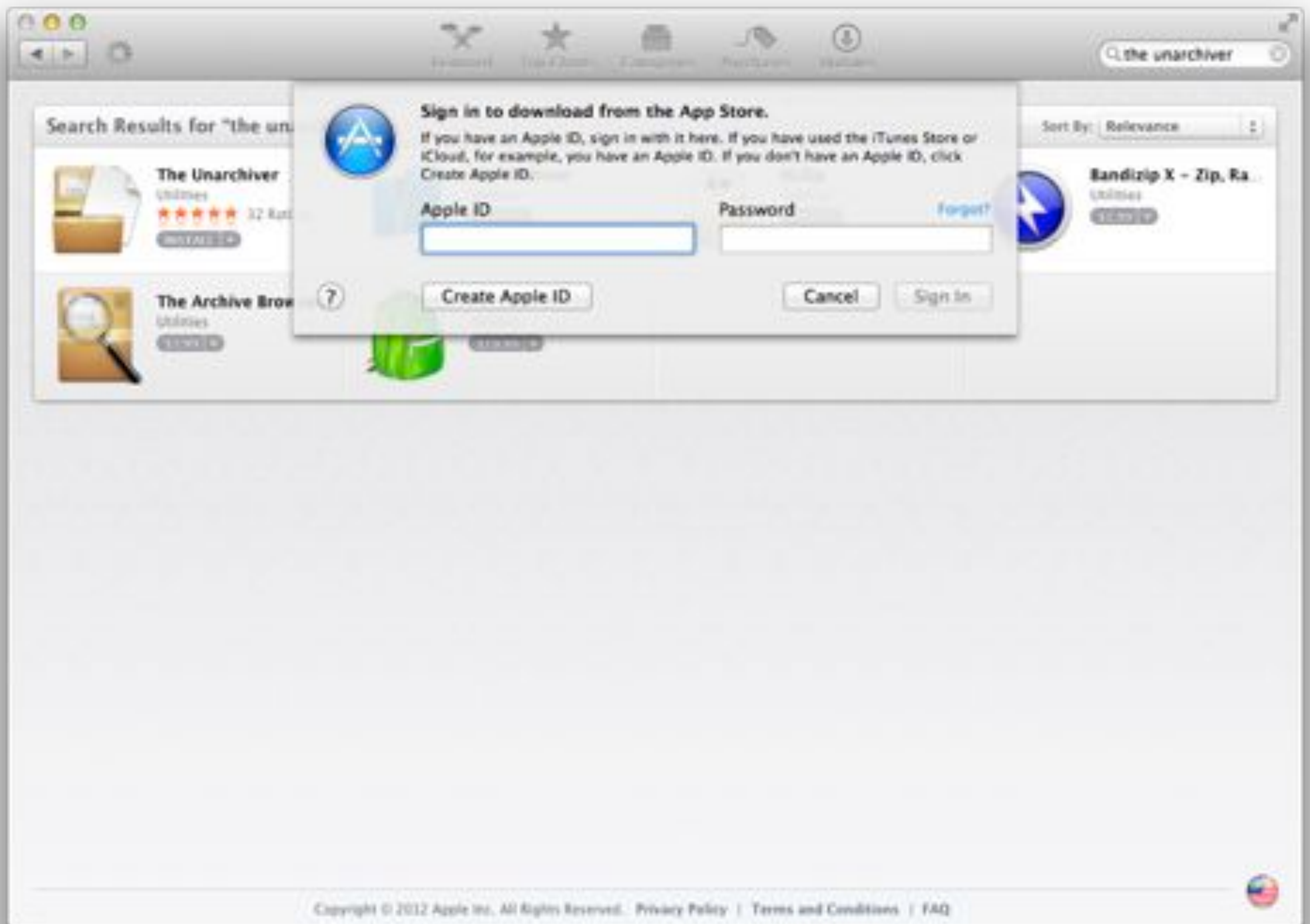


Type 'the unarchiver' in the search box.

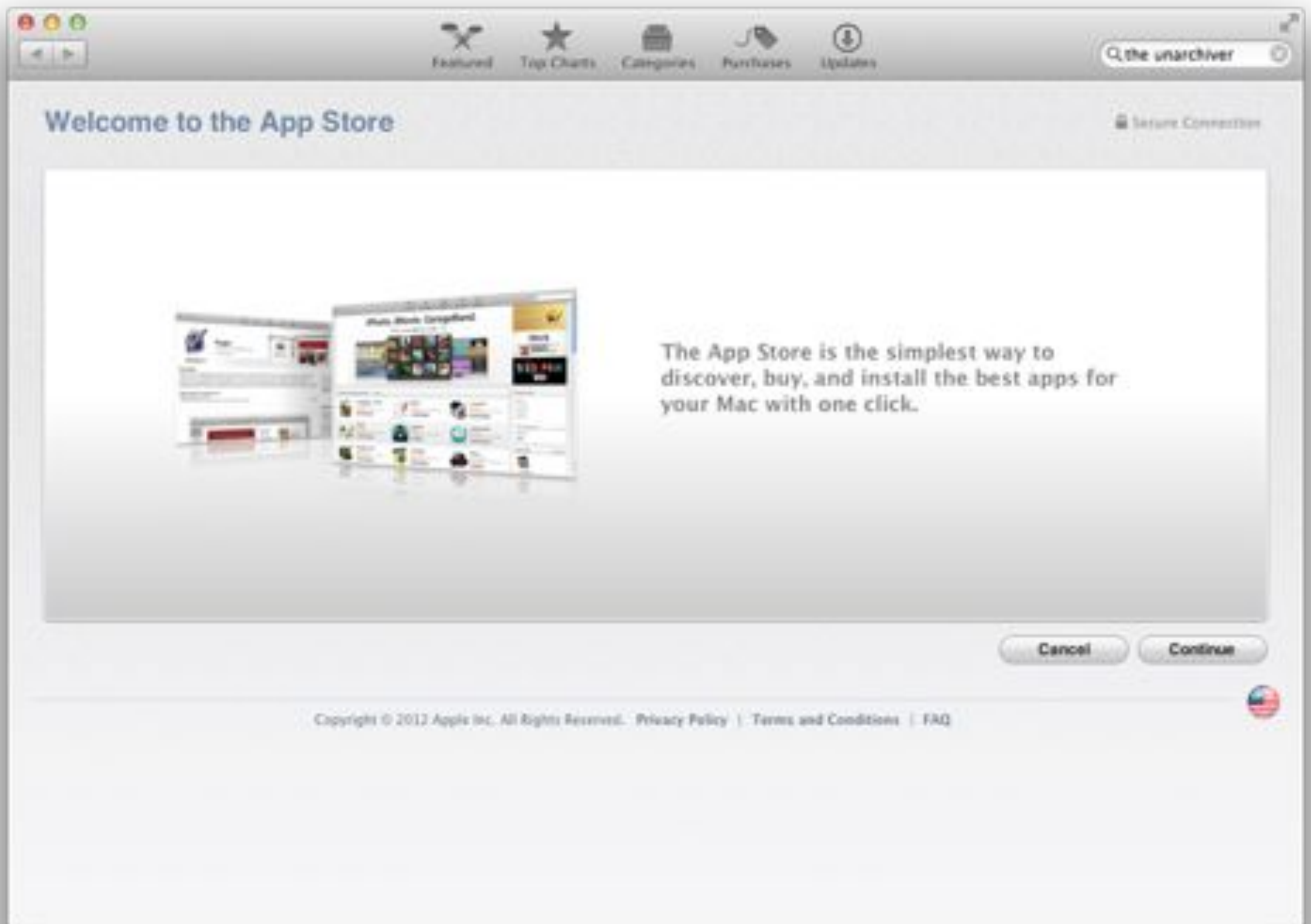


Click on the install button on the The Unarchiver pane.





If you have an AppleID, enter it here. Otherwise click Create Apple ID.



Click Continue.



Tick 'I have read and agree to these terms and conditions'. Click Agree.

The screenshot shows the 'Provide Apple ID Details' window within the iTunes application. The window has a title bar with standard macOS window controls (red, yellow, green buttons) and a search bar containing 'the unarchiver'. Below the title bar, there are navigation icons for 'Featured', 'Top Charts', 'Categories', 'Purchases', and 'Updates'. The main content area is titled 'Provide Apple ID Details' and includes a 'Secure Connection' indicator. The form contains several input fields: 'Email' (with 'email@example.com' entered), 'Password' (with 'Password' entered), and 'Verify Password' (with 'Retype your password' entered). Below these, there is a section for security questions: 'Enter a question and an answer to help us verify your identity if you forget your password.' with 'Question' and 'Answer' input fields. Further down, there is a section for date of birth: 'Enter your date of birth.' with 'Day', 'Month', and 'Year' input fields. At the bottom, there is a section for email preferences: 'Would you like to receive the following via email?' with two checked options: 'New releases and additions to the App Store and the iTunes Store.' and 'News, special offers, and information about related products and services from Apple.' The window has 'Back', 'Cancel', and 'Continue' buttons at the bottom. The footer contains copyright information: 'Copyright © 2012 Apple Inc. All Rights Reserved. Privacy Policy | Terms and Conditions | FAQ'.

Provide Apple ID Details Secure Connection

Email

Password  Verify Password

Enter a question and an answer to help us verify your identity if you forget your password.

Question

Answer

Enter your date of birth.

Day  Month  Year

Would you like to receive the following via email?

- ☒ New releases and additions to the App Store and the iTunes Store.
- ☒ News, special offers, and information about related products and services from Apple.

Back Cancel Continue

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Enter the details to create your AppleID. At the end of this process, you'll be able to download all the free apps from the App Store.



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<b>MACROPLANT</b>  <b>ADAPTER</b> ADAPTER IS A FAST AND EASY TO USE FLV (VIDEO) CATCHER AND CONVERTER TO MANY OS FRIENDLY FORMATS. TRIED AND TESTED BY THE FREEMAC!	<b>DREAMBERRY</b>  <b>DREAMBERRY</b> DREAMBERRY IS A FREE AND EASY TO USE VECTOR GRAPHICS AUTHORIZING TOOL. LAYERS, CORE IMAGE FILTERS AND MORE!	<b>APP OF THE WEEK 1</b>  <b>BLUE GRIFFON</b> BLUE GRIFFON IS A SIMPLE INSTANT WEB PAGE EDITOR WITH A SIMILARITY TO A VERY BASIC DREAMWEAVER. A GOOD MOVE ON FROM WEB-JUNKIE FREE TOOL	<b>APP OF THE WEEK 2</b>  <b>SIMPLE COMIC</b> SIMPLE COMIC IS A READER OF COMIC FILES FOR THE MAC. DOWNLOAD FREE COMICS FROM FOR SOME FREE ENTERTAINMENT	<b>CHALLENGE BUILT LEARNING (CBL) (ONLY)</b> CHALLENGE BUILT LEARNING GIVES STUDENTS THE CHANCE TO TACKLE REAL-WORLD ISSUES AND COME UP WITH SOLUTIONS OF THEIR OWN. THESE PAGES PRESENT WAYS OF DELIVERING CBL IN A UK CONTEXT AND LINK TO THE PLTS CURRICULUM WITH ASSESSMENT RESOURCES, CHALLENGES AND TEACHER INFORMATION. FEEL FREE TO USE THESE RESOURCES IN YOUR SCHOOL, BUT PLEASE CREDIT THE FREEMAC.COM WHENEVER THEY ARE PRINTED OUT OR USED IN AN ELECTRONIC FORM...
<b>FREE TRAINING MATERIALS</b> YOU WILL FIND A GROWING RANGE OF CURRICULUM MATERIALS, CONFERENCE PRESENTATIONS AND TRAINING FILES TO HELP YOU GET THE MOST OUT OF YOUR APPLE PRODUCTS IN THE CLASSROOM. WE CAN HELP YOU WITH MACS IN THE PRIMARY CURRICULUM, STARTING AN IPAD 1:1 ROLL OUT, USING OPEN SOURCE SOFTWARE AND EMBEDDING DIGITAL MEDIA IN YOUR PROGRAMME OF STUDY. ALL MATERIALS ARE © THE FREEMAC BUT ARE FREE TO USE IN EDUCATION.	<b>SITE OF THE WEEK</b>  <b>HIPABUS</b> THIS SITE HAS THE SHAR MODEL FROM FLUEN PLANTEDUPA. AN EXCELLENT APPROACH TO IMPLEMENTING TECHNOLOGY IN SCHOOLS.	<b>THE FREE MAC CLASSROOM</b> <b>EBOOK (PDF)</b>	<b>Google Apps</b> Google Mail, Calendar & Docs for small business. Sign Up Now! <a href="http://www.google.com/au">www.google.com/au</a> <b>Boost Your Career Today</b> Study On Weekends / Evenings. Get Your Diploma Or Degree At INTI <a href="http://www.inti.edu.my/Centre/education">www.inti.edu.my/Centre/education</a> <b>Home Tuition KL/ Selangor</b> UPM, PMR, SPM, IGCSE, O/A-Level. Tuition from RM300 per month! <a href="http://www.hometuition.com">www.hometuition.com</a> <b>Malaysia Educational Tool</b> Places to get Teaching Equipment? Find Companies! Contact and More <a href="http://www.100000.com/Teaching">www.100000.com/Teaching</a>	

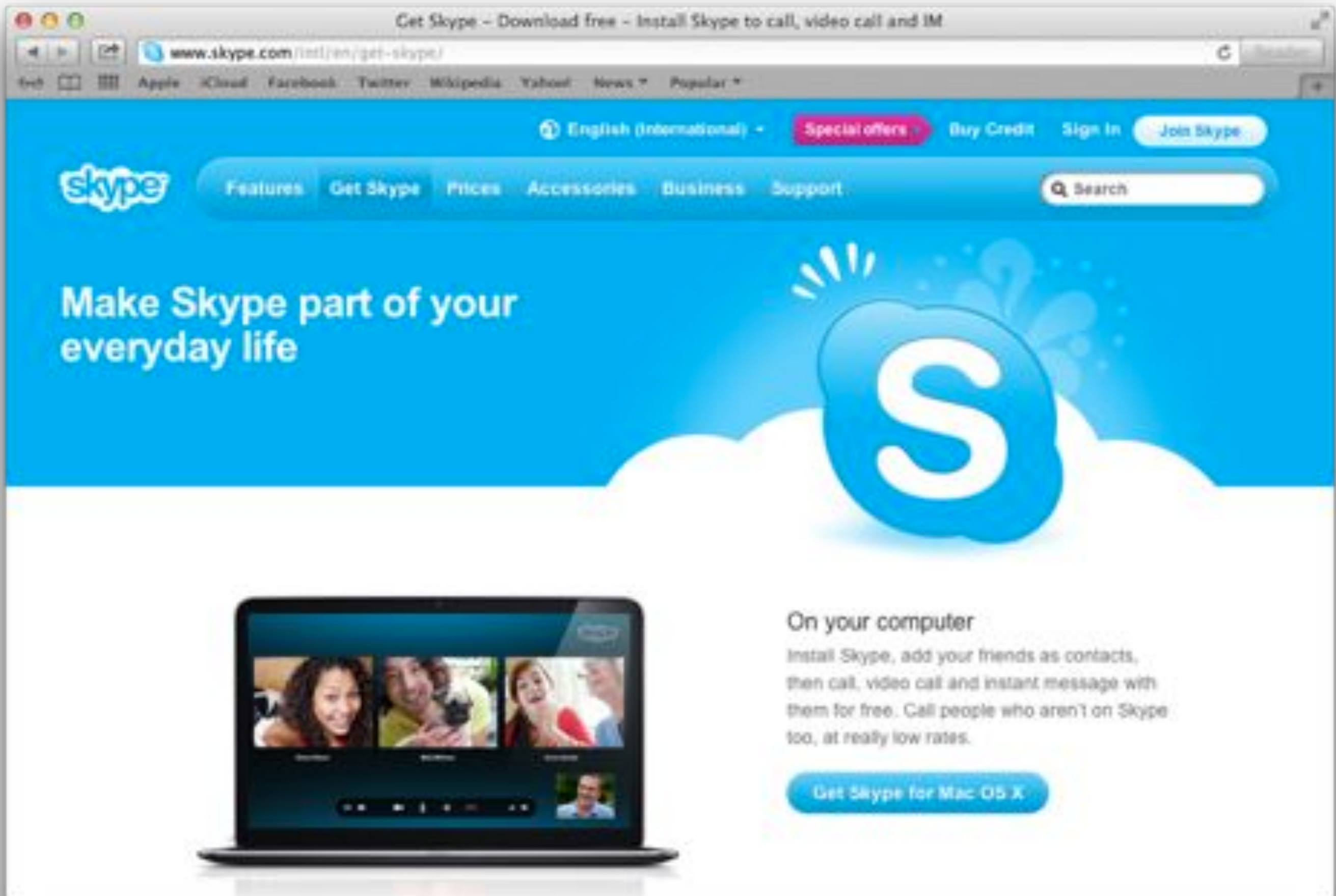
**992045**

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You can also download Apps from The Free Mac classroom (thefreemac.com). Some apps have drag and drop install, others will use Installer.





Skype is an example of a drag and drop install. Download Skype from [www.skype.com](http://www.skype.com).



The download will appear in your Downloads folder. Double click it to launch.



Just drag Skype into the Applications folder shortcut as shown. It will be copied into the Applications folder. Remember to eject the disk image when done.

Download Windows Media® Components for QuickTime from Official Microsoft Download Center

www.microsoft.com/en-us/download/details.aspx?id=9442


Apple iCloud Facebook Twitter Wikipedia Yahoo! News \* Popular \*

### Quick links

- Overview
- System requirements
- Instructions

### Looking for support?

Visit the Microsoft Support site now >



With Windows Media® Components for QuickTime, by Flip4Mac™, you can play Windows Media files (.wma and .wmv) directly in QuickTime Player and view Windows Media content on the Internet using a Web browser.

### Quick details

Version:	2.4.4 & 3.0	Date published:	9/21/2012
Language:	English		

### Files in this download

The links in this section correspond to files available for this download. Download the files appropriate for you.

File name	Size	
2.4.4.2/Flip4Mac WMV 2.4.4.2.dmg	25.2 MB	<a href="#">DOWNLOAD</a>
3.0.0.126/Flip4Mac 3.0.0.126.dmg	62.1 MB	<a href="#">DOWNLOAD</a>
3.0.0.126/Flip4Mac_3.0_Release_Notes.pdf	140 KB	<a href="#">DOWNLOAD</a>
Flip4Mac WMV 2.4.4.2 Release Notes.pdf	105 KB	<a href="#">DOWNLOAD</a>

### Overview

Windows Media Components for QuickTime allows you to play Windows Media content on your Mac. Download it from [www.microsoft.com](http://www.microsoft.com).





Double click on the disk image to open it.





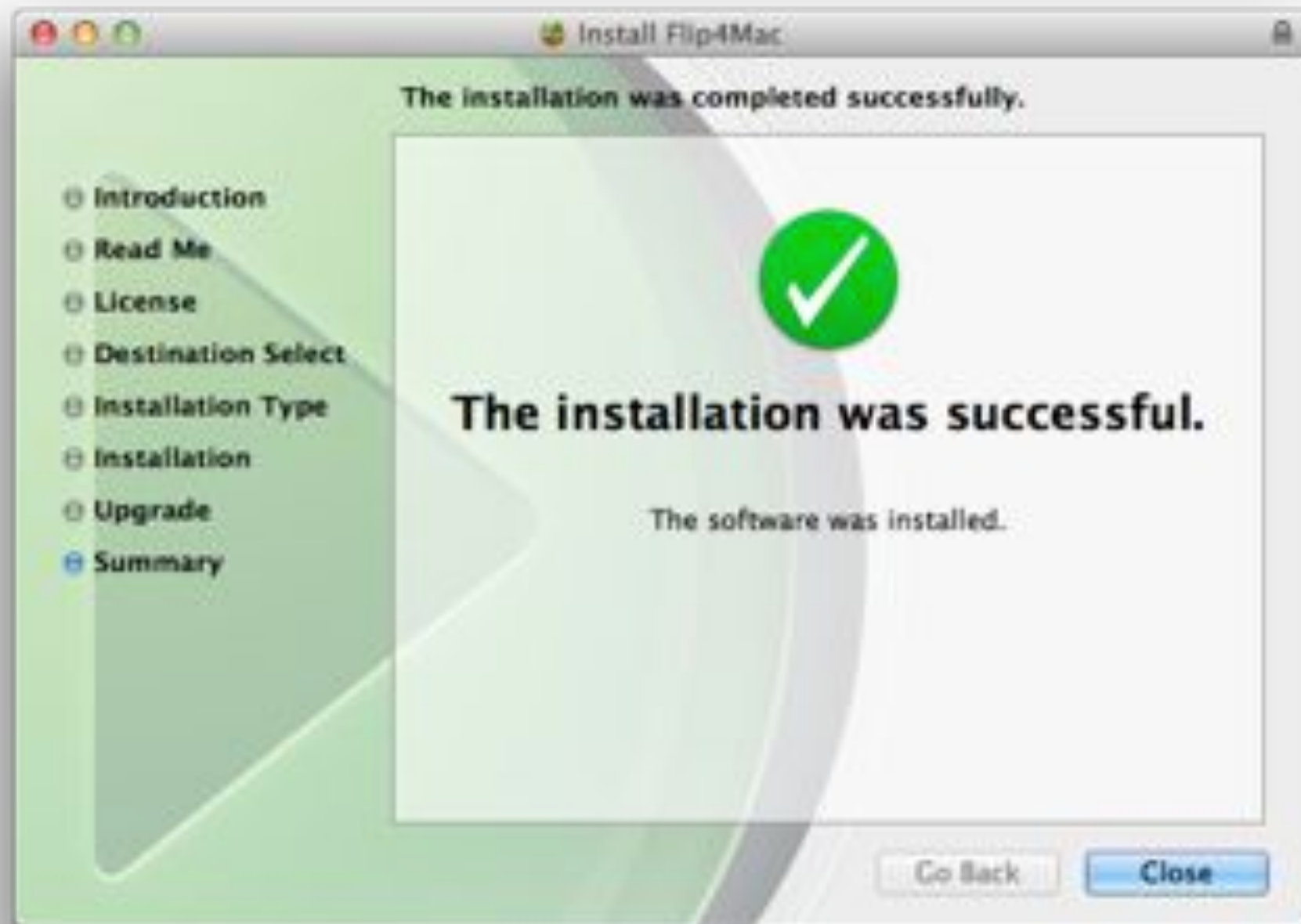
Double click Flip4Mac.pkg to launch the Apple Installer.



Just follow the step by step installation by clicking Continue.



Enter the administrator username and password when prompted.



The program has been installed. Click Close.

# 5.2 Delete Applications



To delete applications, just put it into the Trash and choose Empty Trash.

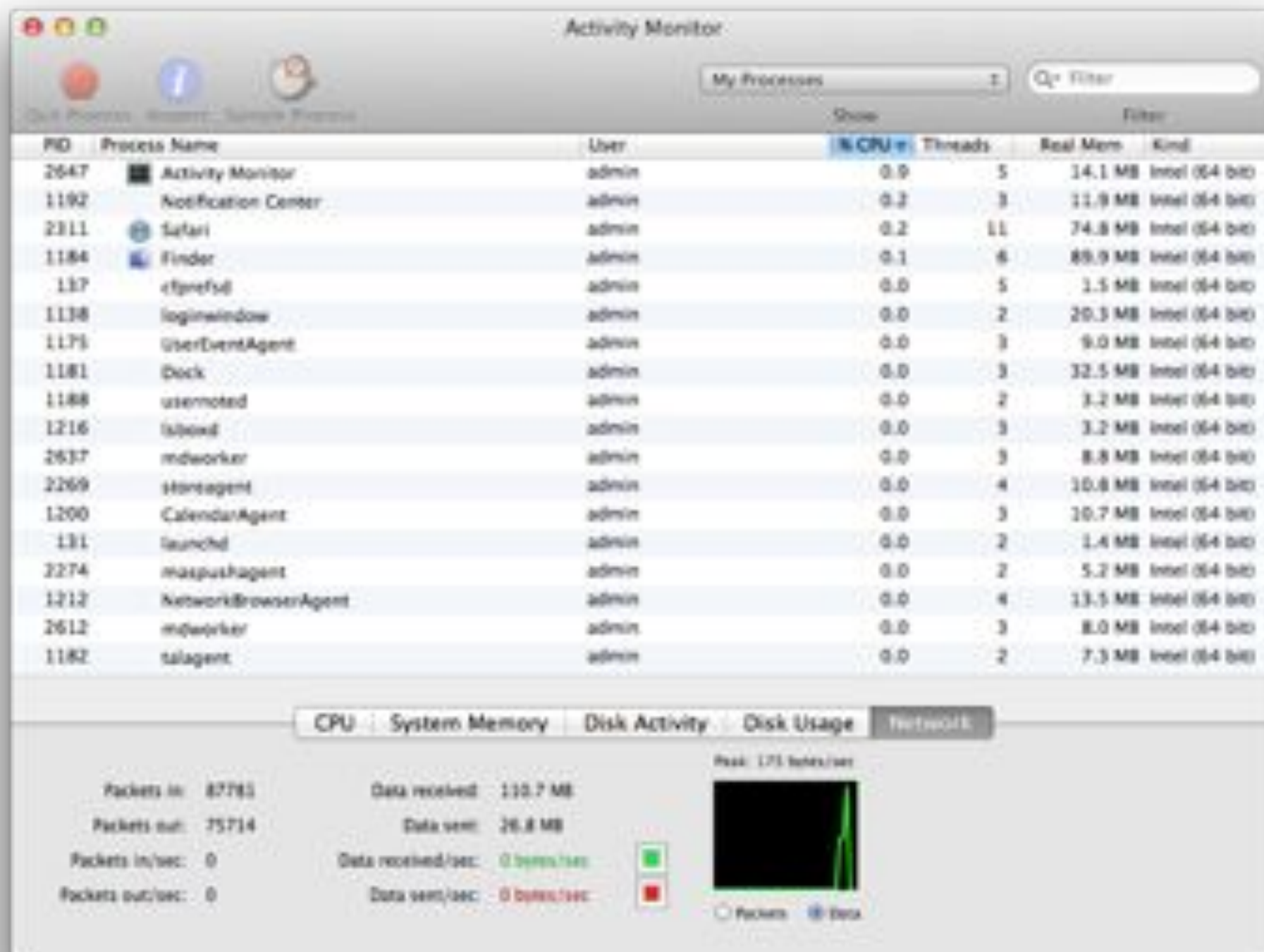


# 5.3 Force Quit



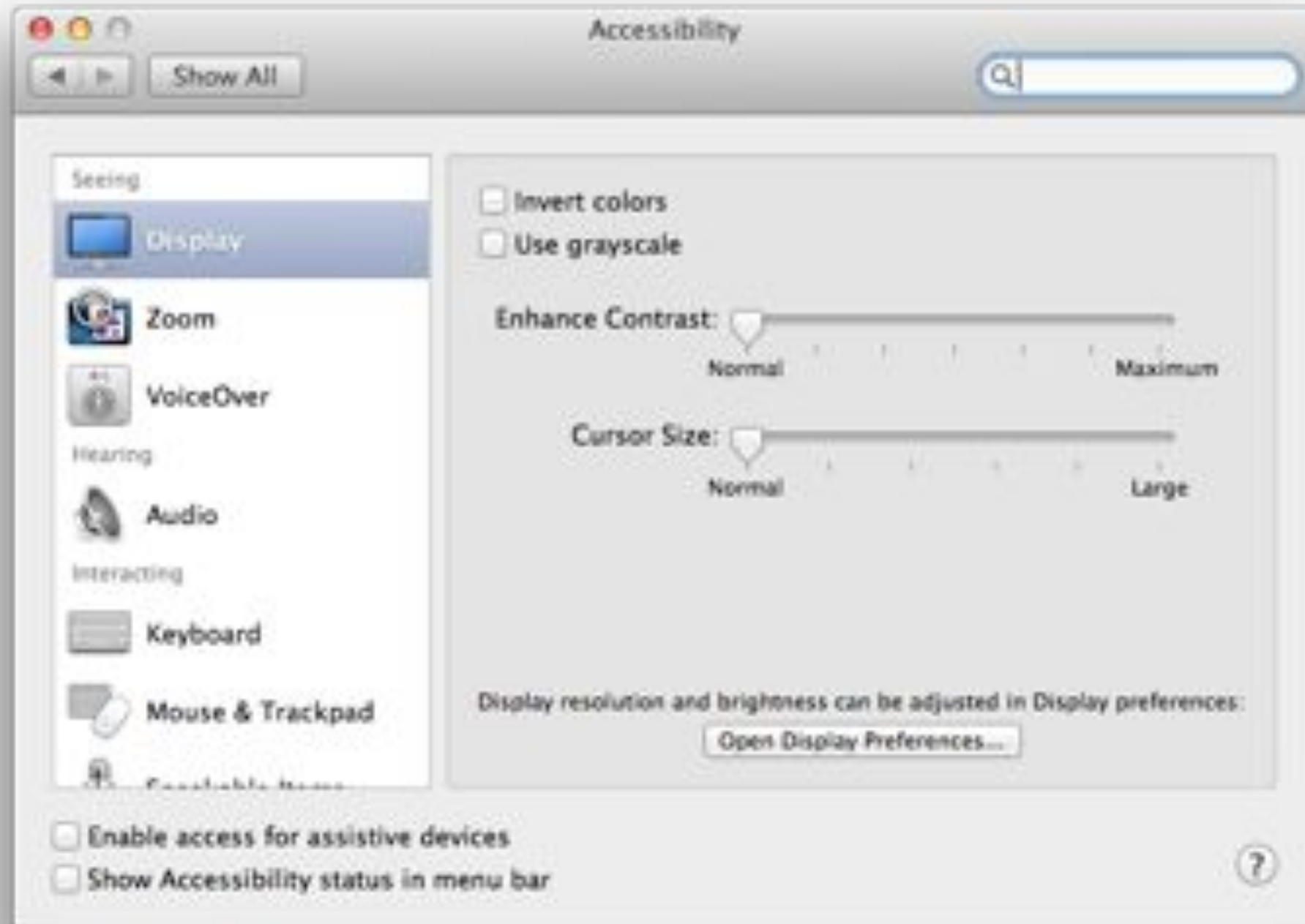
If programs hang, you can Force Quit them by pressing Command-Option-Esc.

# 5.4 Activity Monitor



If your Mac feels slow, you can open Activity Monitor to see which programs are taking up a lot of resources.

## 5.5 Accessibility



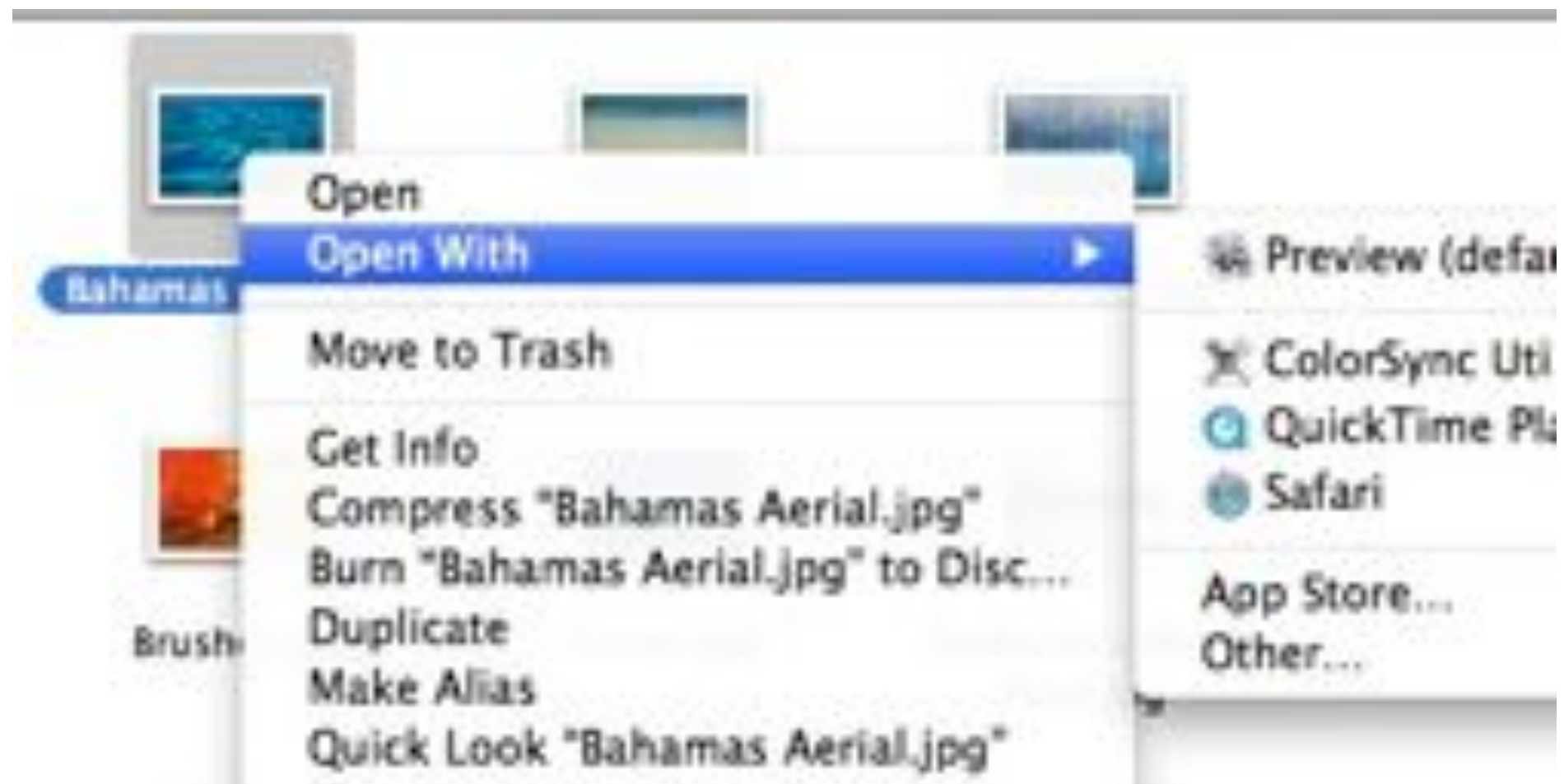
You can change the cursor size to make it easier to see.



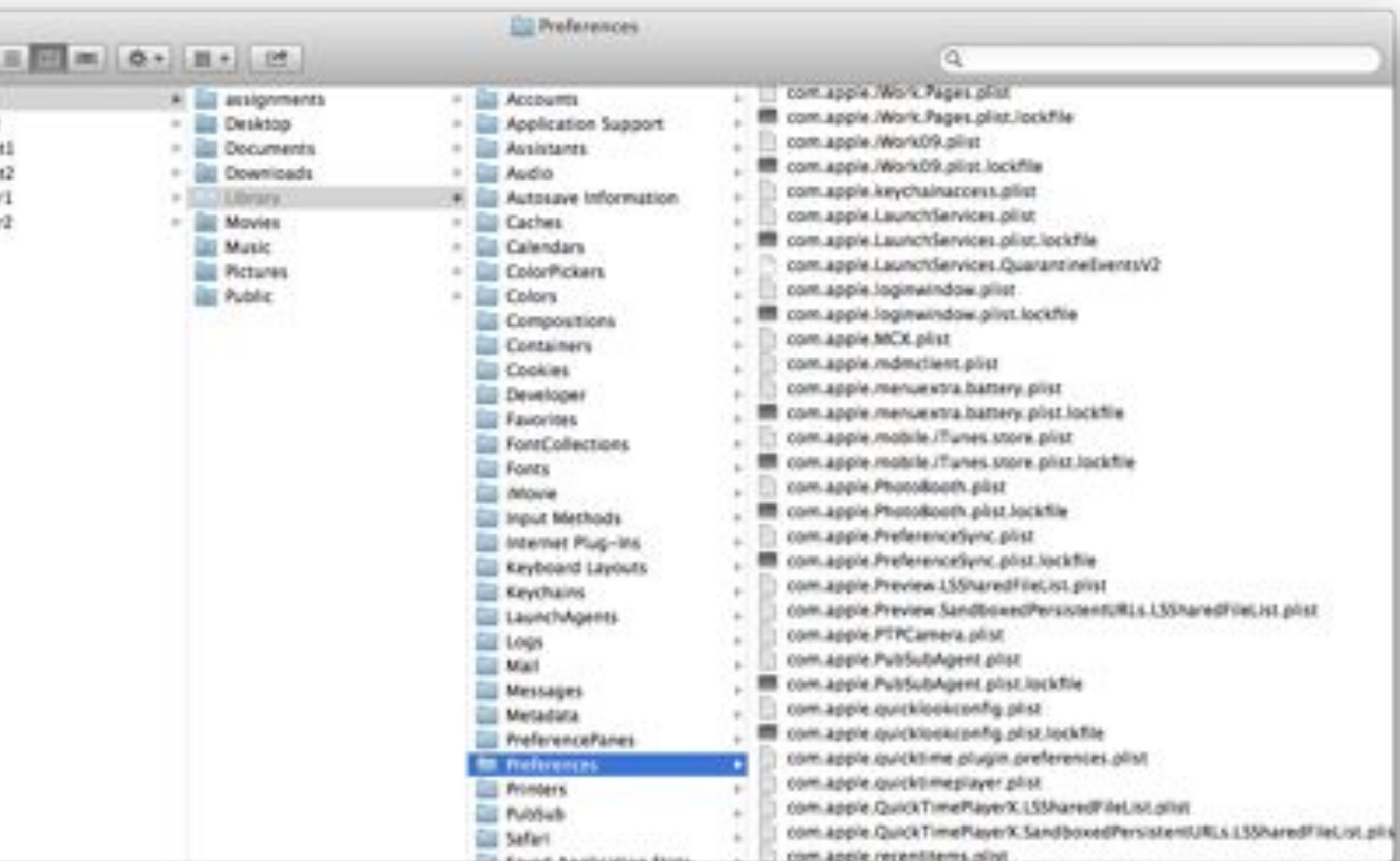
You can also zoom in and out to make items on your screen easier to see.



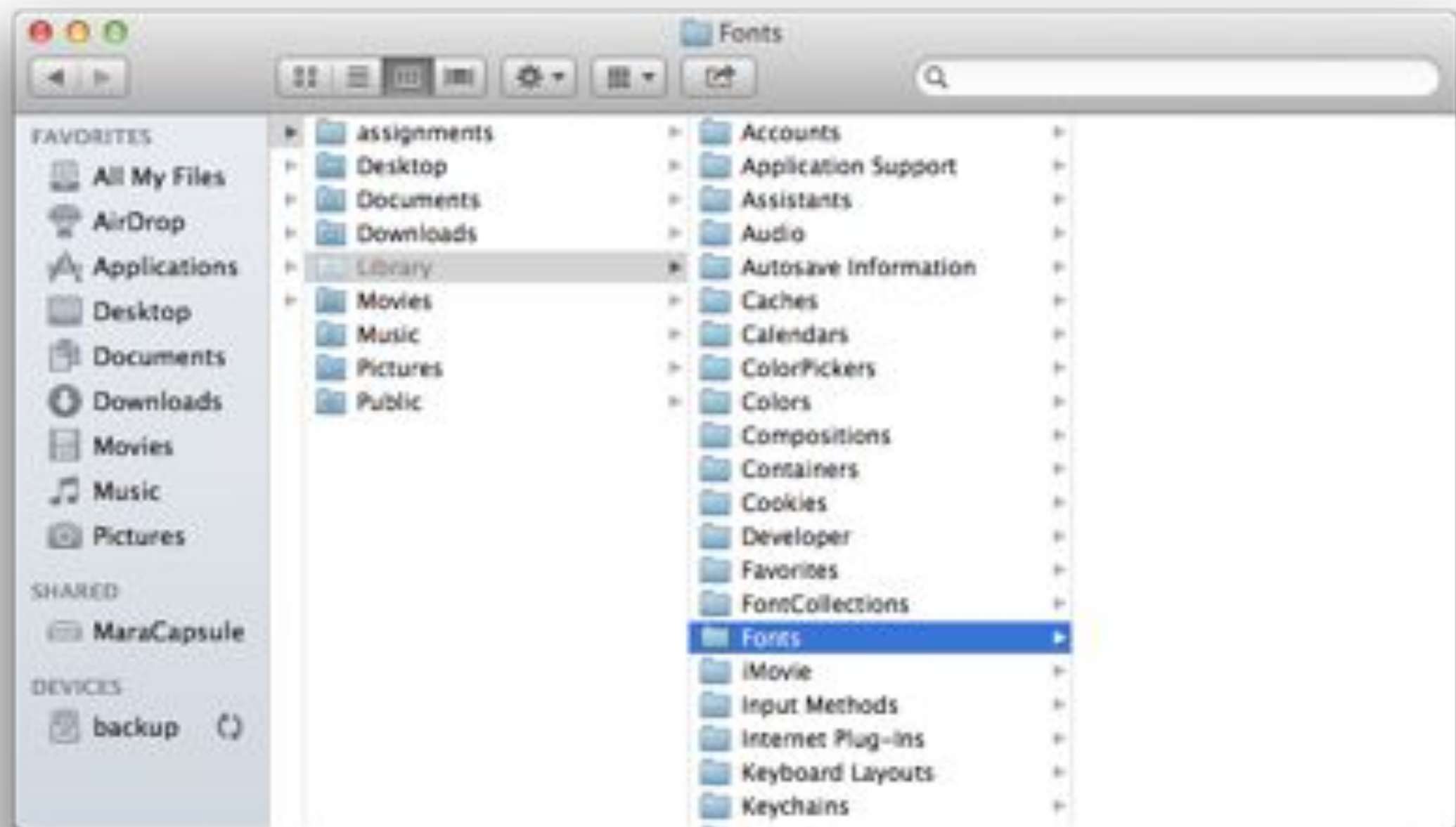
## 5.6 Application troubleshooting



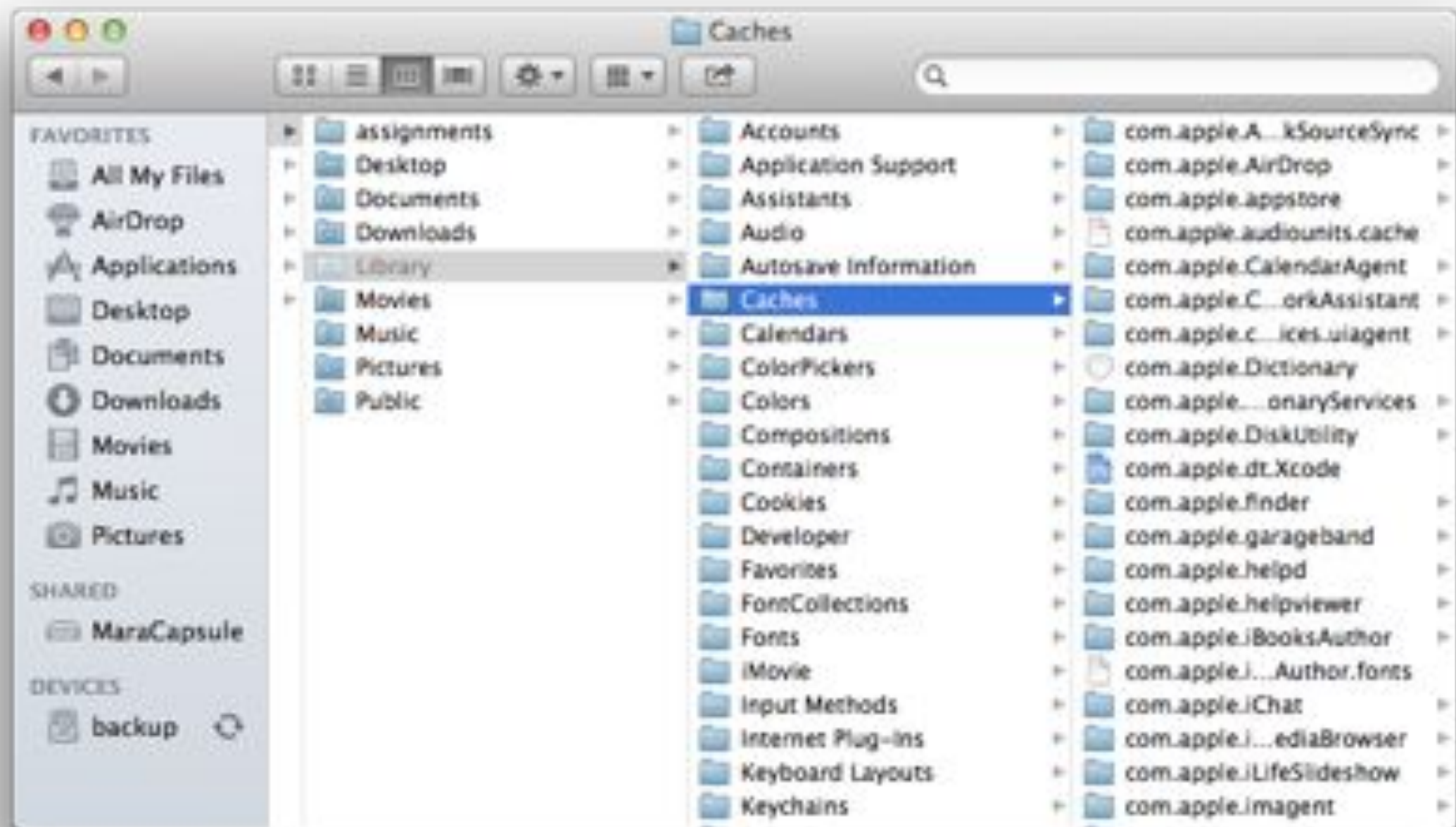
If a file won't open, try opening in another program. Right click the file and choose Open With...



Try removing the Preferences of the program you are using. The computer will create a fresh copy.



Try removing any additional fonts in your system.



Finally, you can try removing everything in the `~/Library/Caches` and `/Library/Caches` folder.



## 5.7 Dashboard



To access Dashboard, press F4 on the keyboard.

www.e-solat.gov.my

Type a word or phrase to search for, or a webpage address, title, or bookmark

**eSolat** **سلاط**

Persempaduan & Simulasi Langgiti, Jambatan, dan Muzium Islam yang diwujudkan oleh YAB Dato Seri YB Datuk Menteri Besar dan Menteri MAMPU, ANWAR IBRAHIM

**Kuala Lumpur**

**Prayer Time**

Gen	8
Coordination	3°07' 31" N
Prayer Time	
Uthman	5:30
Sukuh	5:40
Israk	7:00
Imar	13:01
Aur	16:22
Maghrib	18:58
Israk	20:30

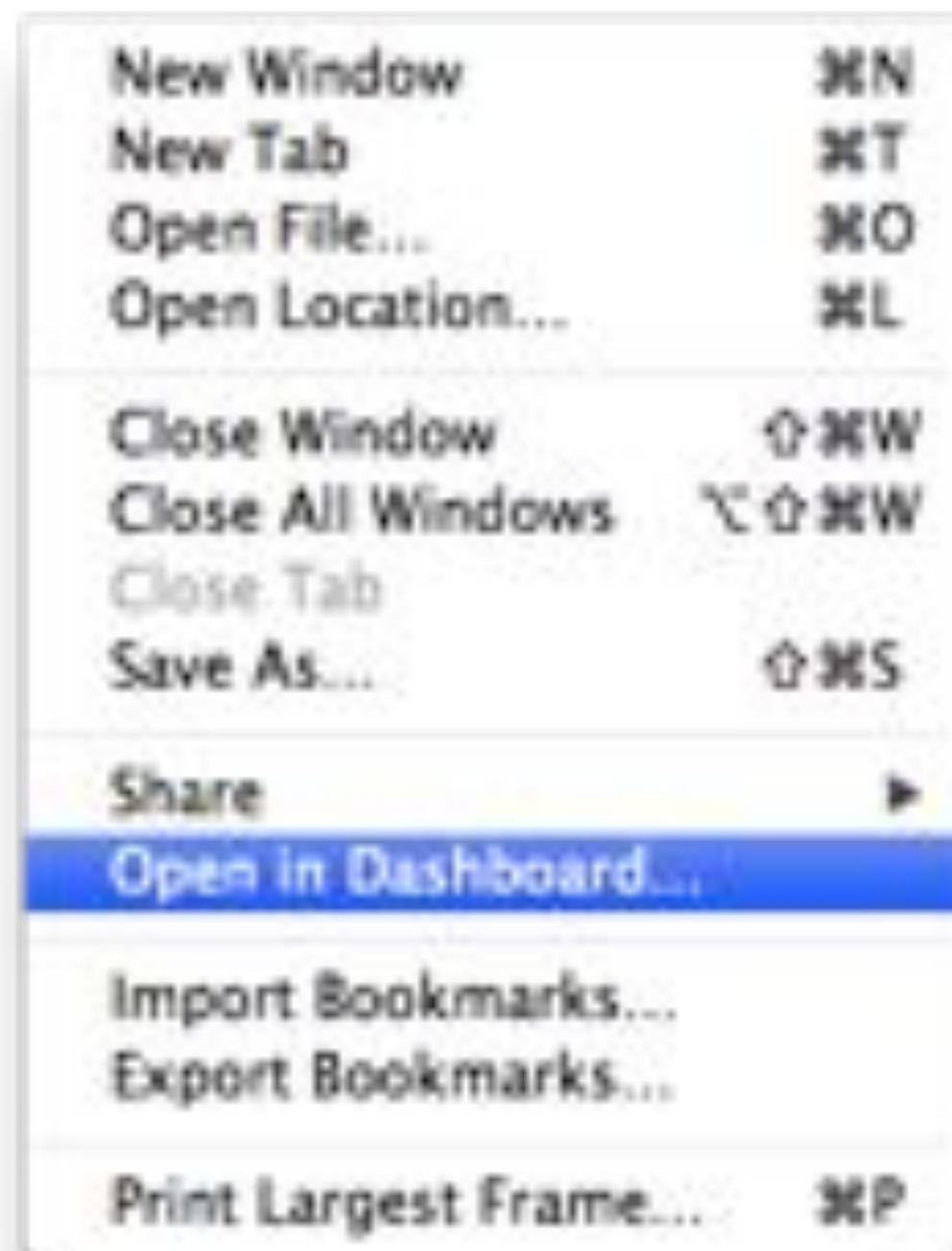
**Main Page**  
**FAQ**  
**Indonesia**  
**Java**  
**Global Overview: Malaysia Federal Territory of Kuala Lumpur**  
**Details**  
**Peraturan Solat Jarak & Ghar**  
**Idharah Fala**  
**Source Code**

**Malaysia**

**Other Country**

Note: Prayer time for other countries depend on the application supported by Department of Survey and Mapping Malaysia (JUPEM). Kindly contact JUPEM if there is any access problem

You can make web content appear in Dashboard. Go to a website which has the elements you want.



Choose File -> Open in Dashboard...





Choose the area of the screen that you would like to appear in Dashboard. Click Add.





It appears in the Dashboard.

# 5.8 Windows

# Boot Camp



To run Windows on your Mac, use Boot Camp. It comes with every Mac. You will need a full Windows software and license as well.

# VirtualBox



You can also install VirtualBox which is a free download from [www.virtualbox.org](http://www.virtualbox.org).

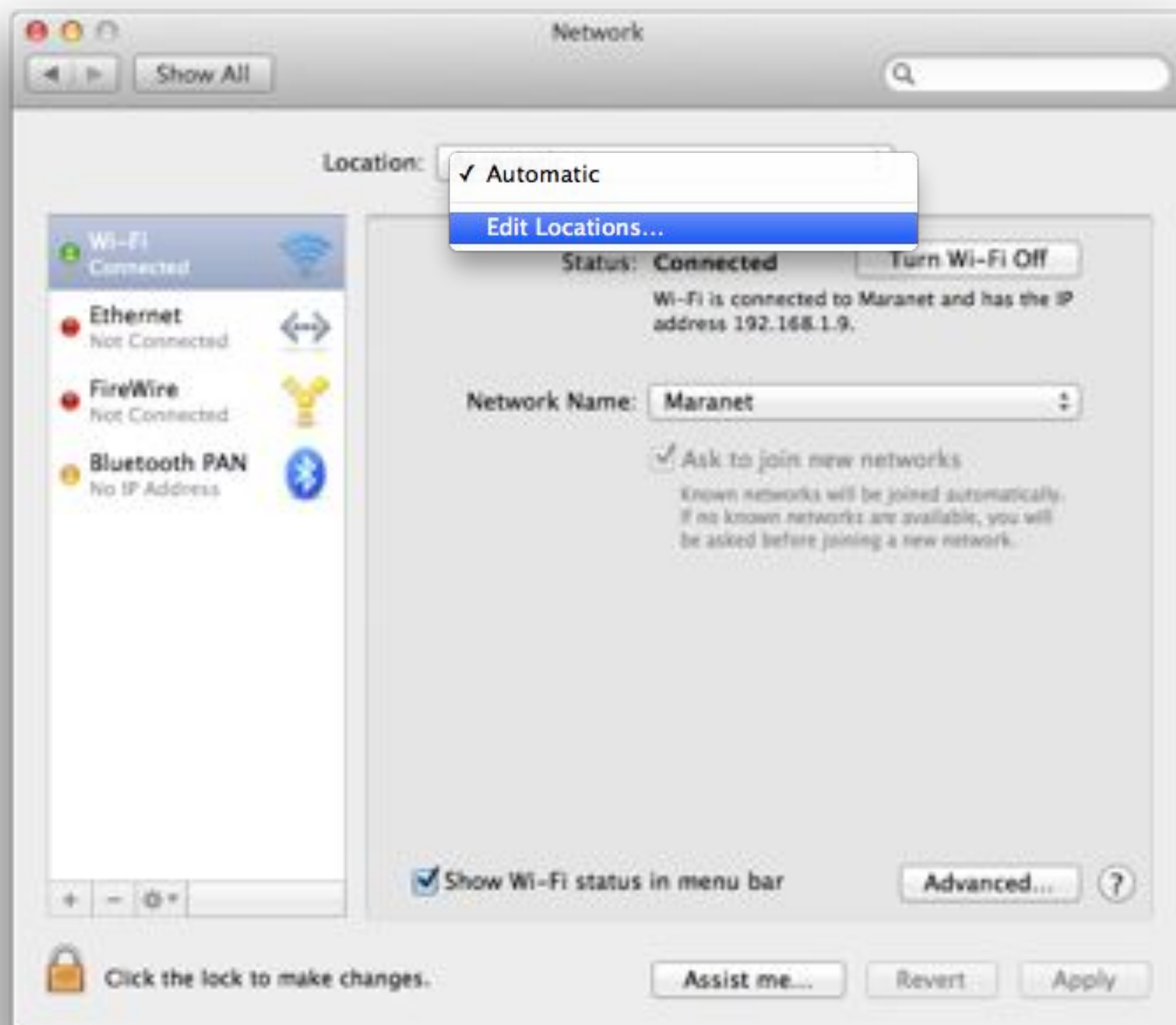
# 6. Network configuration



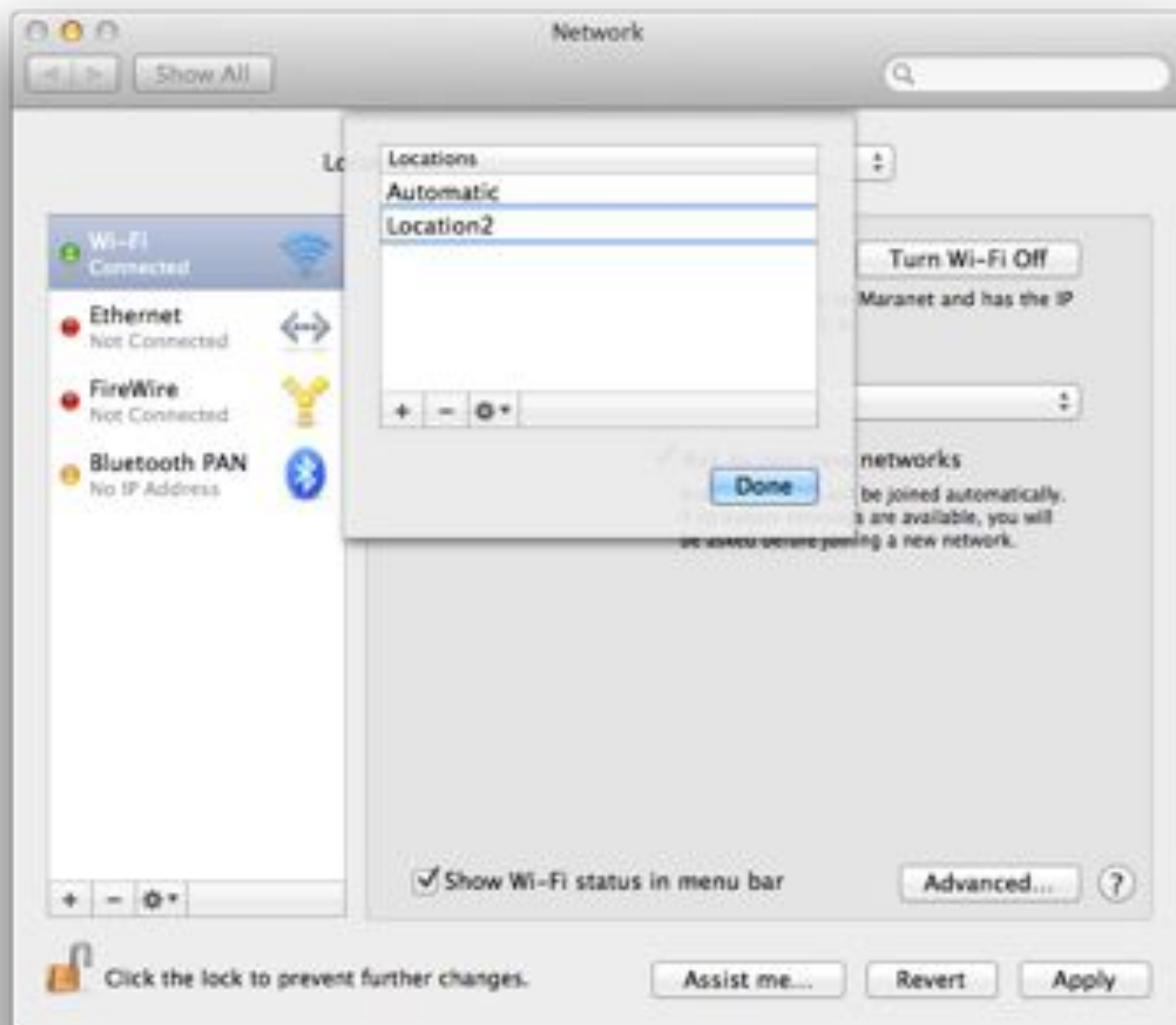
# 6.1 Location



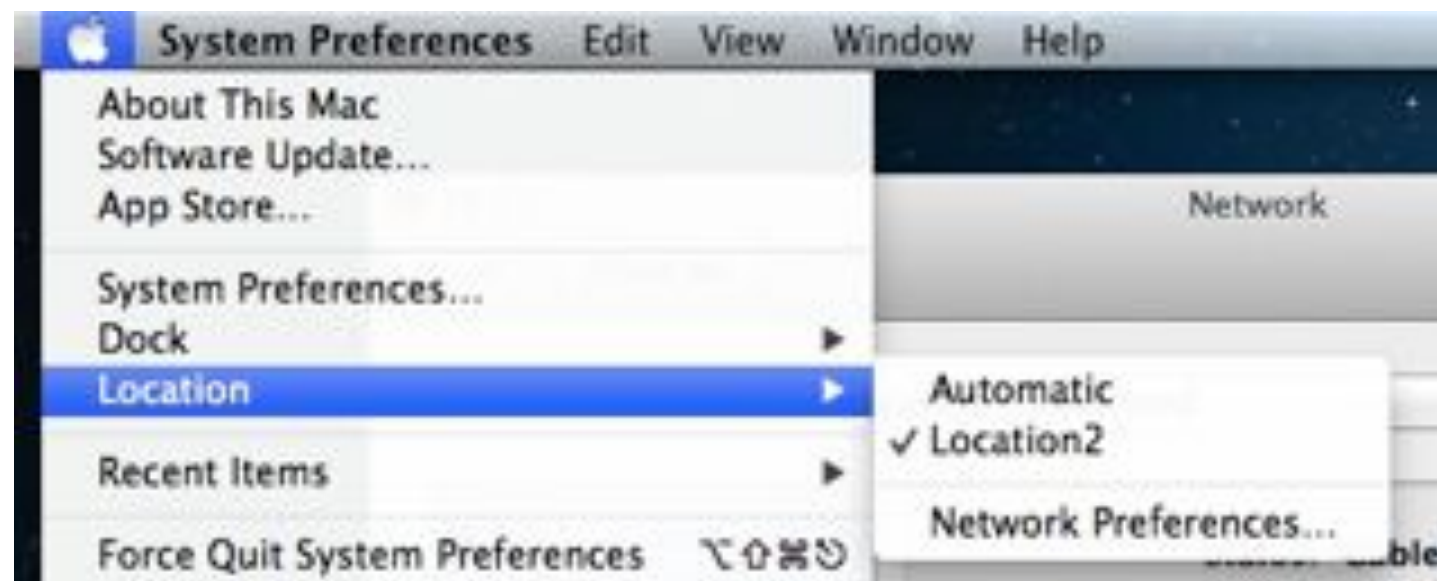
You can set up multiple locations for one computer. Each location can be configured differently. Open System Preferences -> Network.



Choose Edit Locations... from the location menu.



Click the + button to create a new location. Click Done. Click Apply.



Now you can switch locations using the Apple menu -> Location.



# 6.2 Ethernet settings



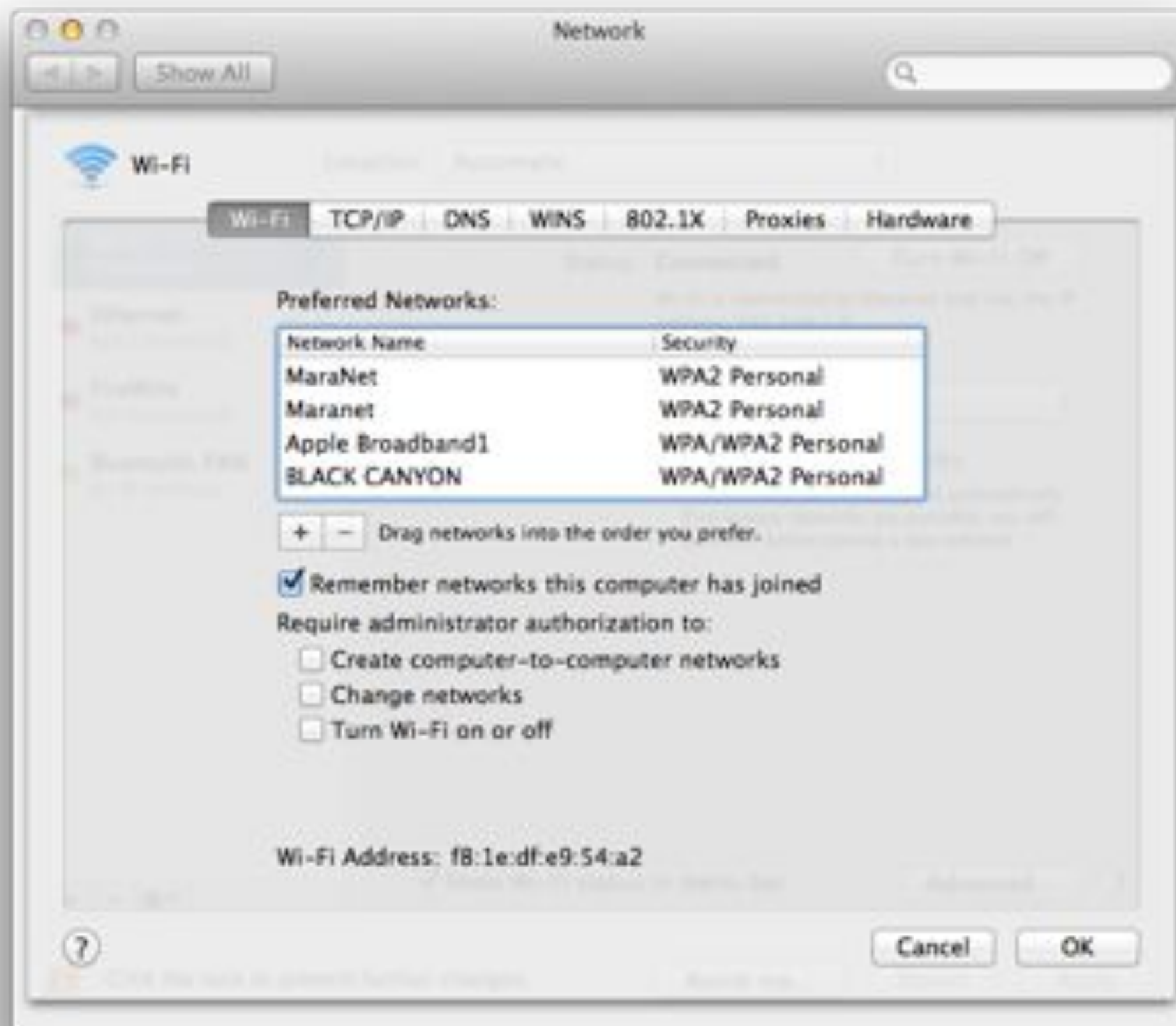
To configure your Ethernet connection, click on Ethernet on the left hand pane. Click Advanced.

# 6.3 Wi-Fi settings

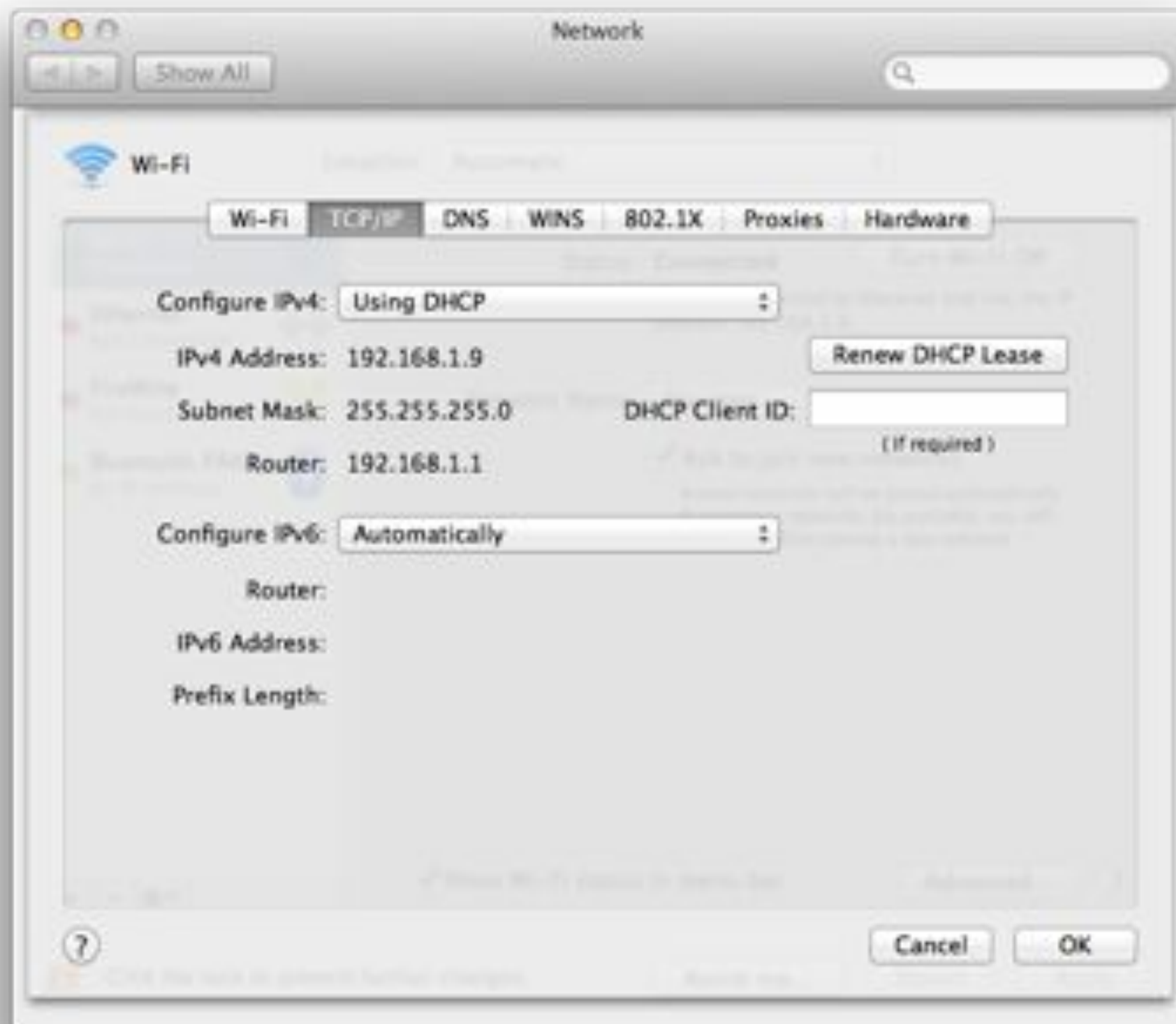


To configure Wi-Fi settings, click on Wi-Fi on the left hand pane. Click Advanced.

# 6.4 Advanced



Wi-Fi (Wi-Fi only) – Allows you to set preferred Networks, remember previous networks joined, and administrator control.

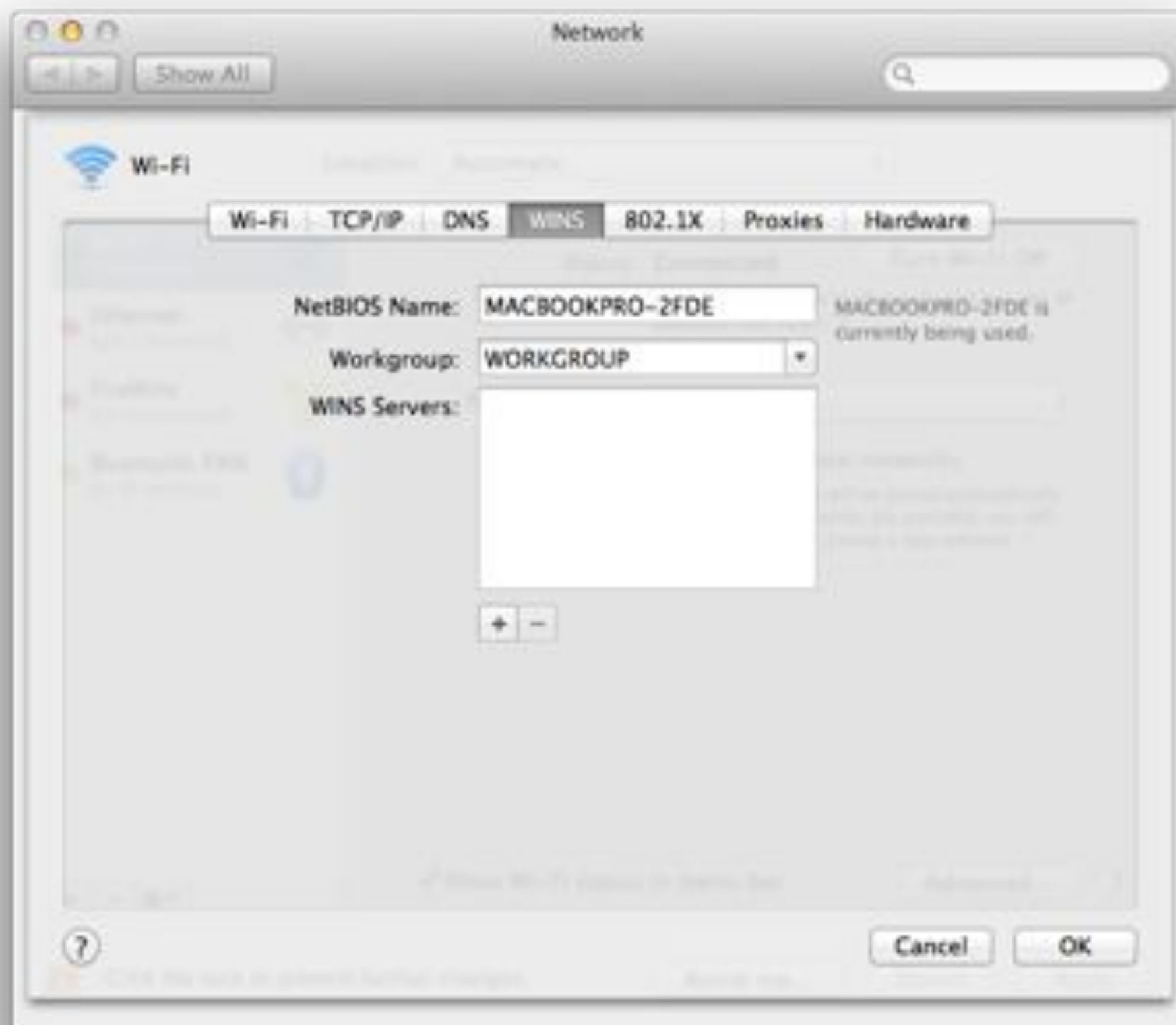


TCP-IP – allows you to set either DHCP or fixed IP.





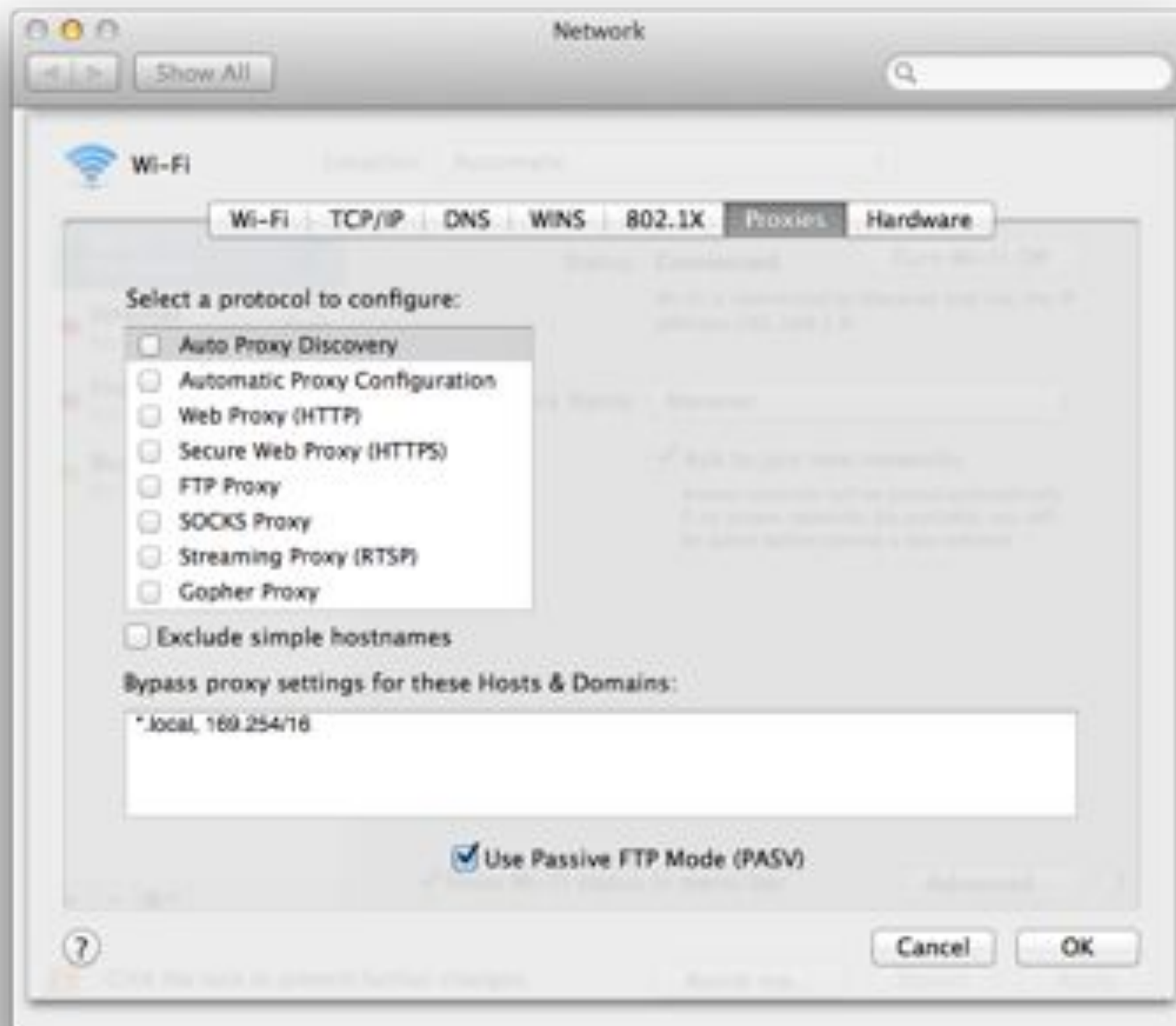
DNS – allows you to set DNS servers.



WINS – allows you to set Workgroup and WINS servers.



802.1x – If your network has 802.1x connection, the configuration will be automatic and will appear here.



Proxies – Allows you to set the Proxy server.



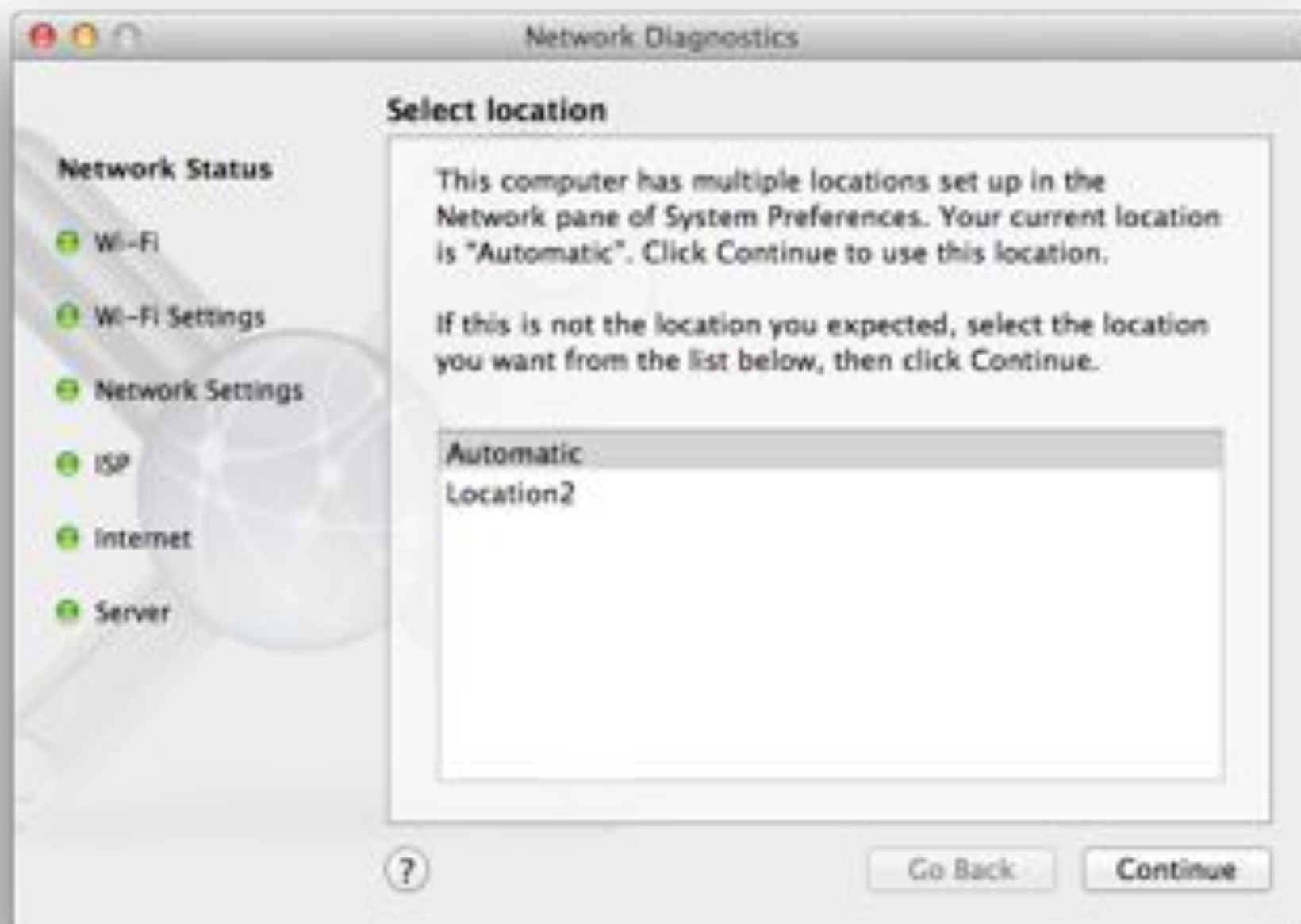
Hardware – allows you to set the hardware characteristics of the port.



# 6.5 Network Diagnostics

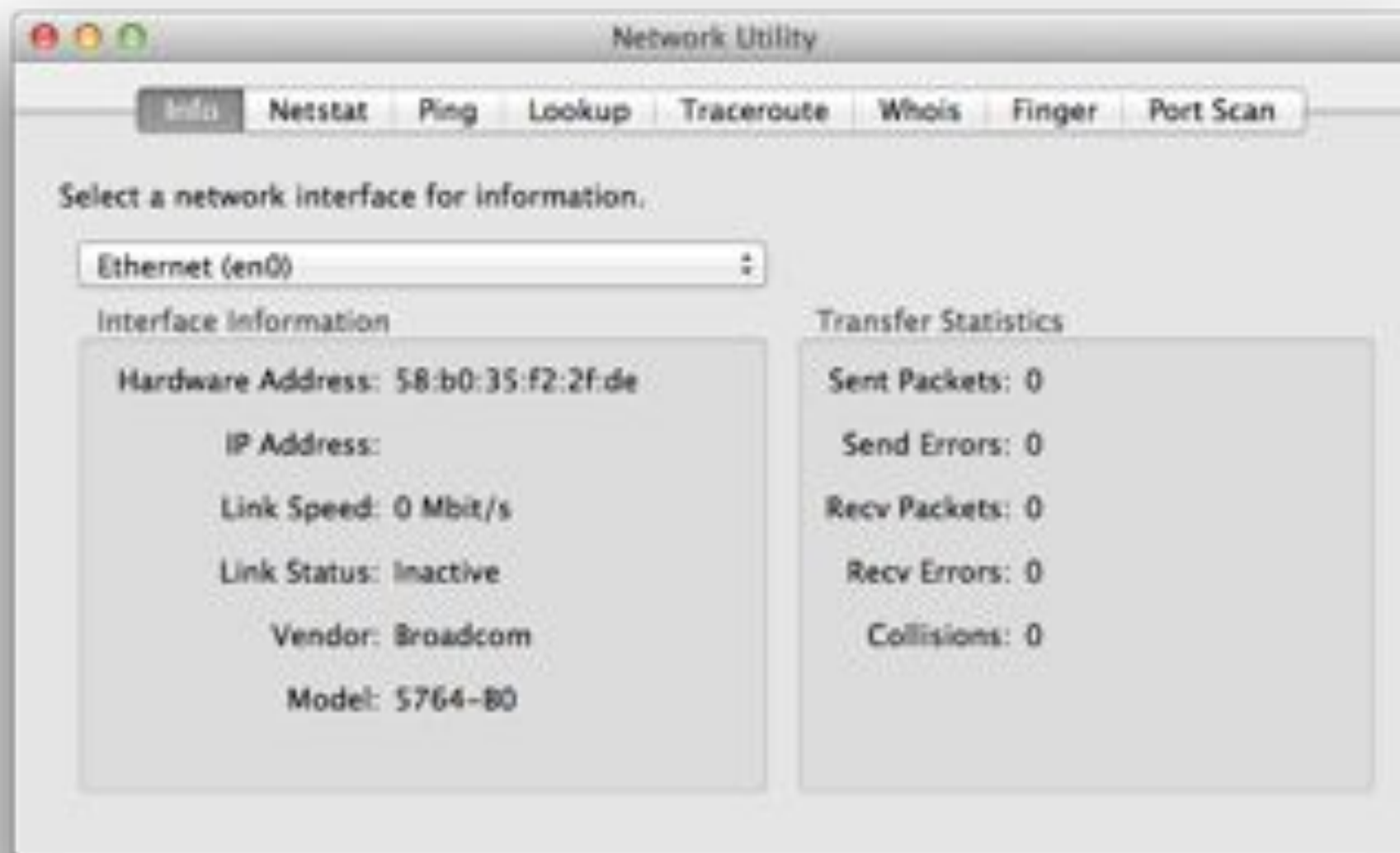


If your network connection isn't working properly you can click Assist me... in the System Preferences -> Network pane. Click Diagnostics.



The wizard walks you through the troubleshooting process.

# 6.6 Network Utility



You can use the Network Utility to perform common network troubleshooting tasks such as Ping and Lookup.

# 7. Network services



# 7.1 Network Neighborhood



Choose Network from the Finder's Go menu.



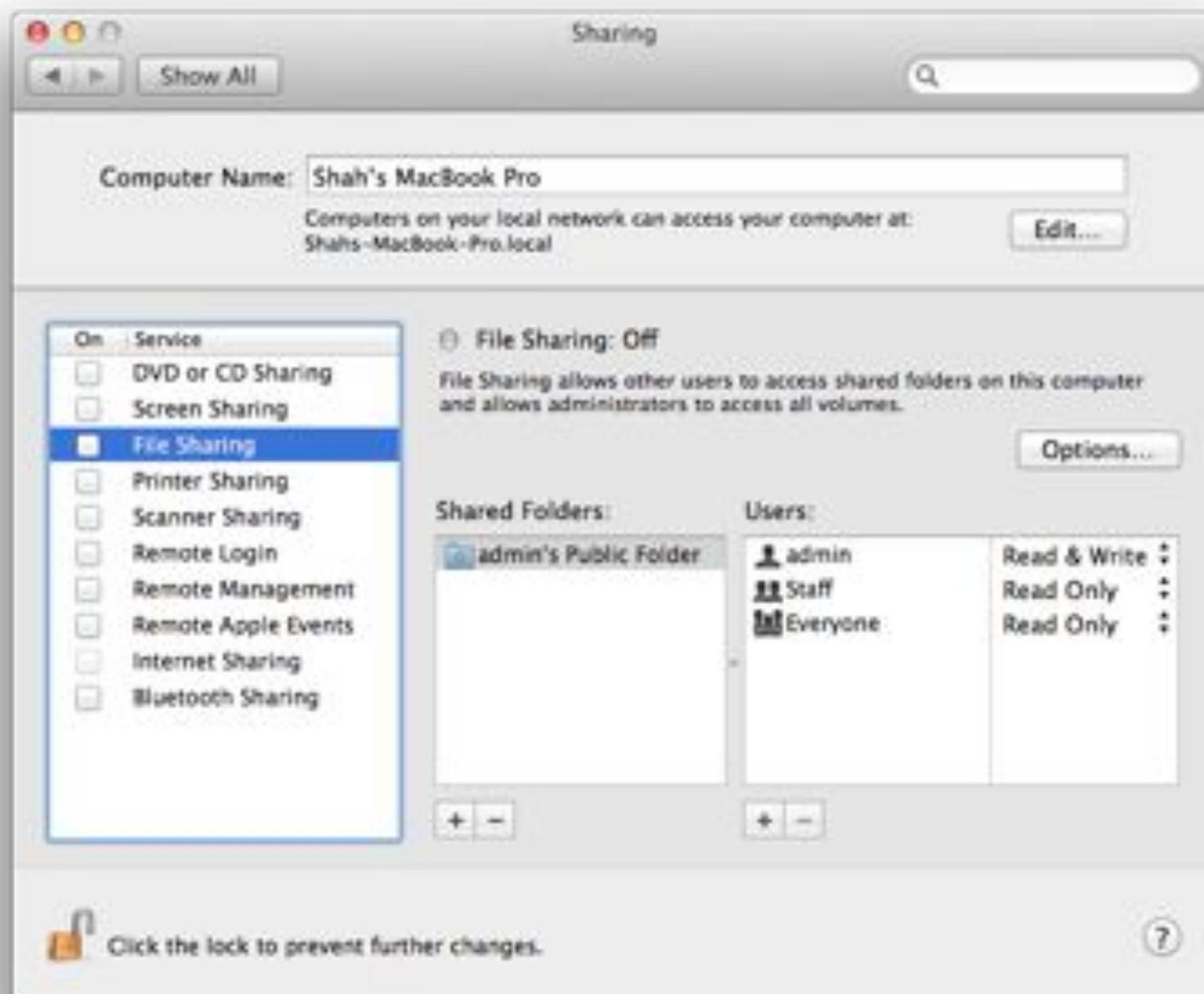
You will see all the computers in the local area network.

## 7.2 File sharing

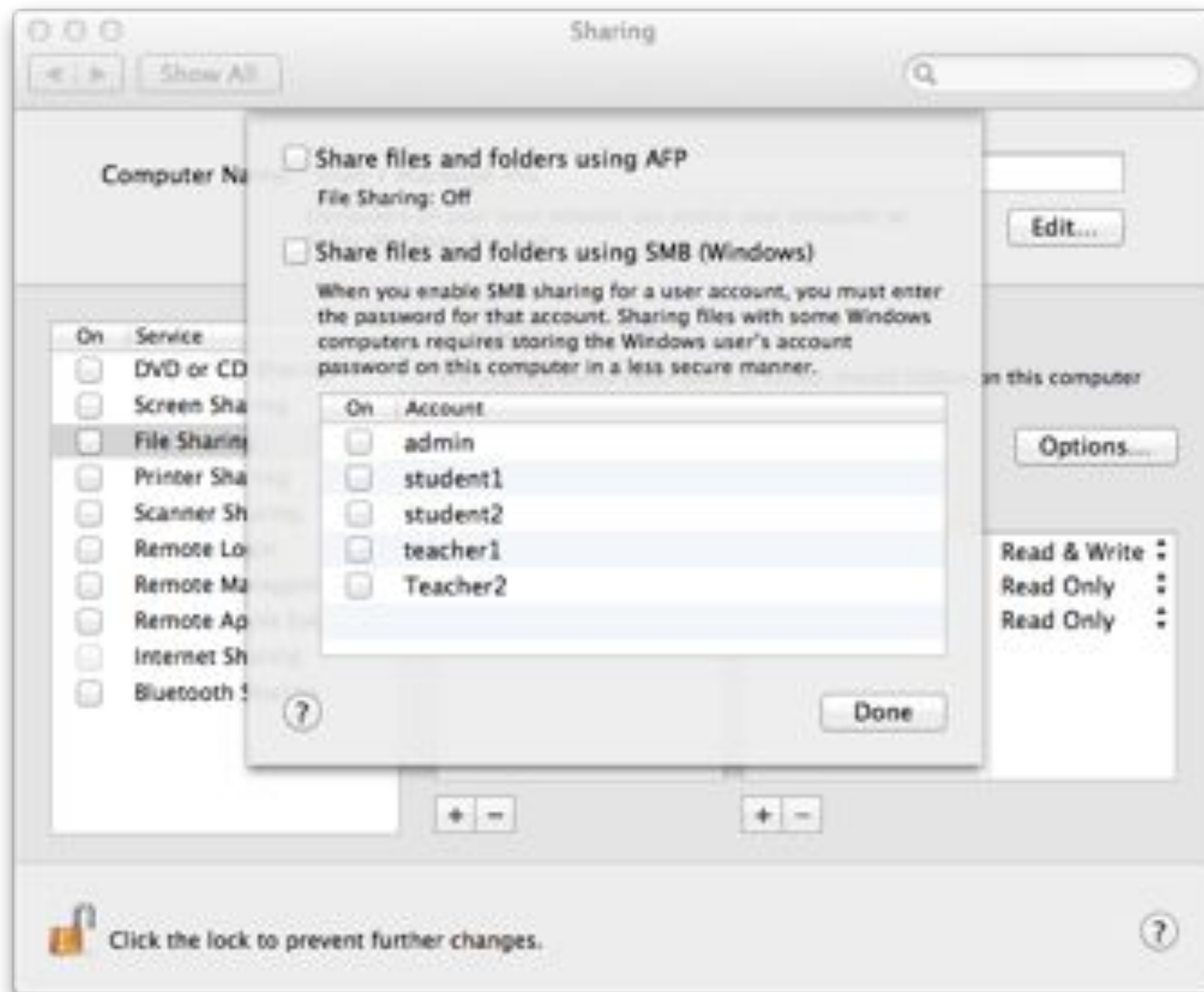


On computer A, open System Preferences and choose Sharing. You can change the computer name here.

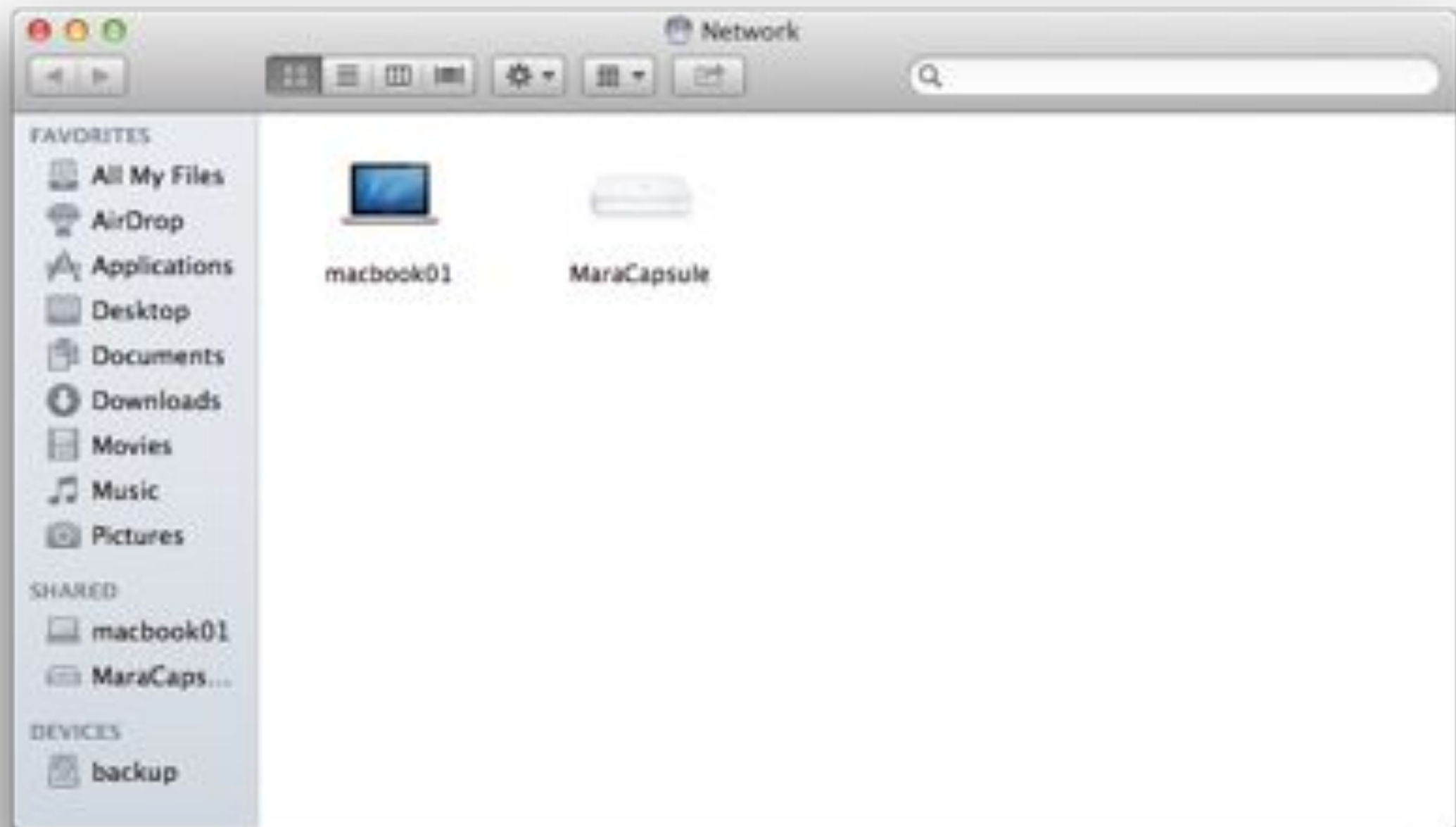




Tick File Sharing.



Under options, you can enable Mac File sharing only or both Mac and Windows file sharing. For Windows file sharing, you also have to enable the specific accounts.



On computer B, choose Network from the Finder's go menu. Computer A should be visible. Double-click it.



Click Connect As...



Enter your name and password for the server "macbook01".

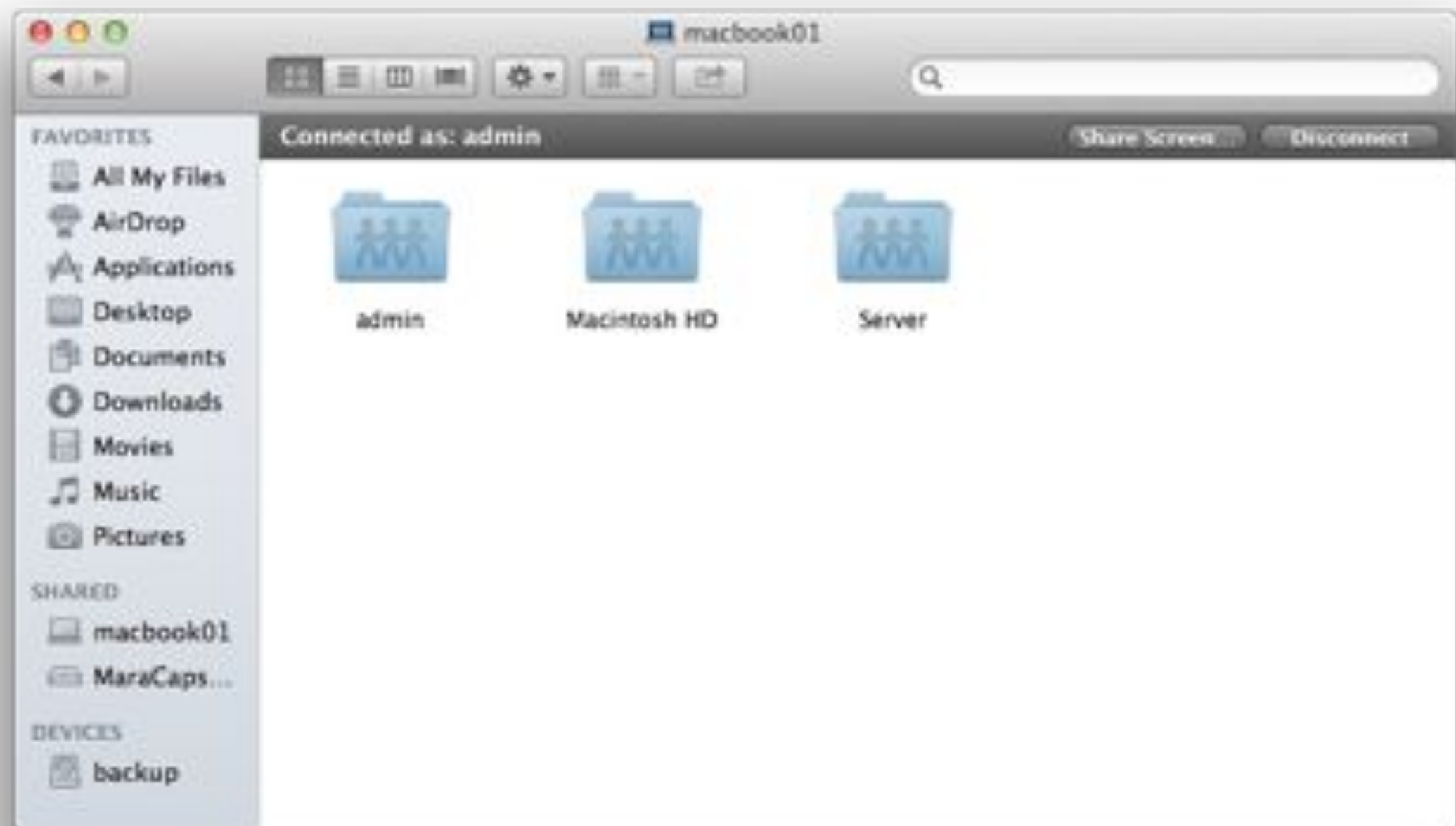
Connect as: ☐ Guest  
☒ Registered User

Name:

Password:

☐ Remember this password in my keychain

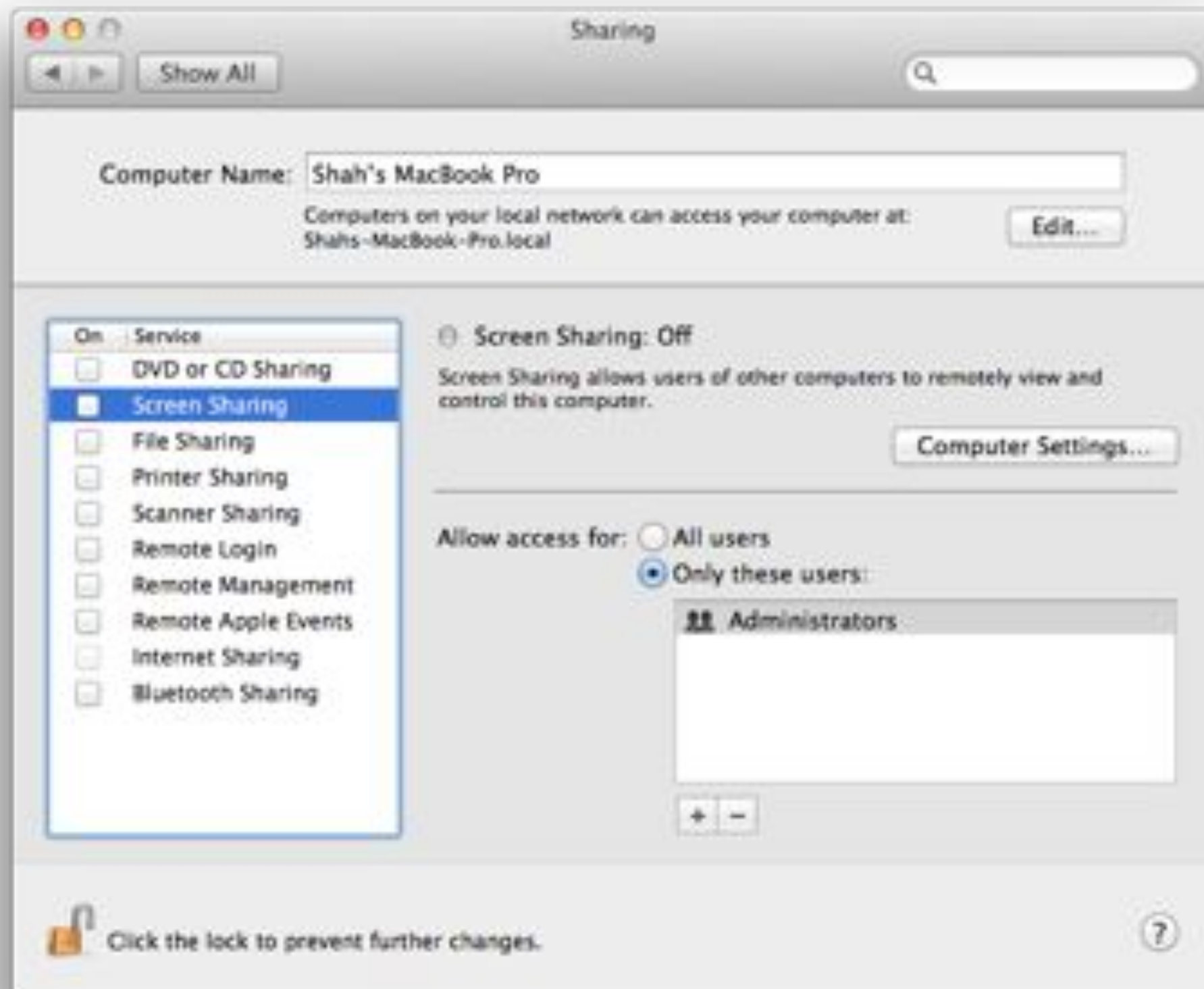
Put in admin's username and password.



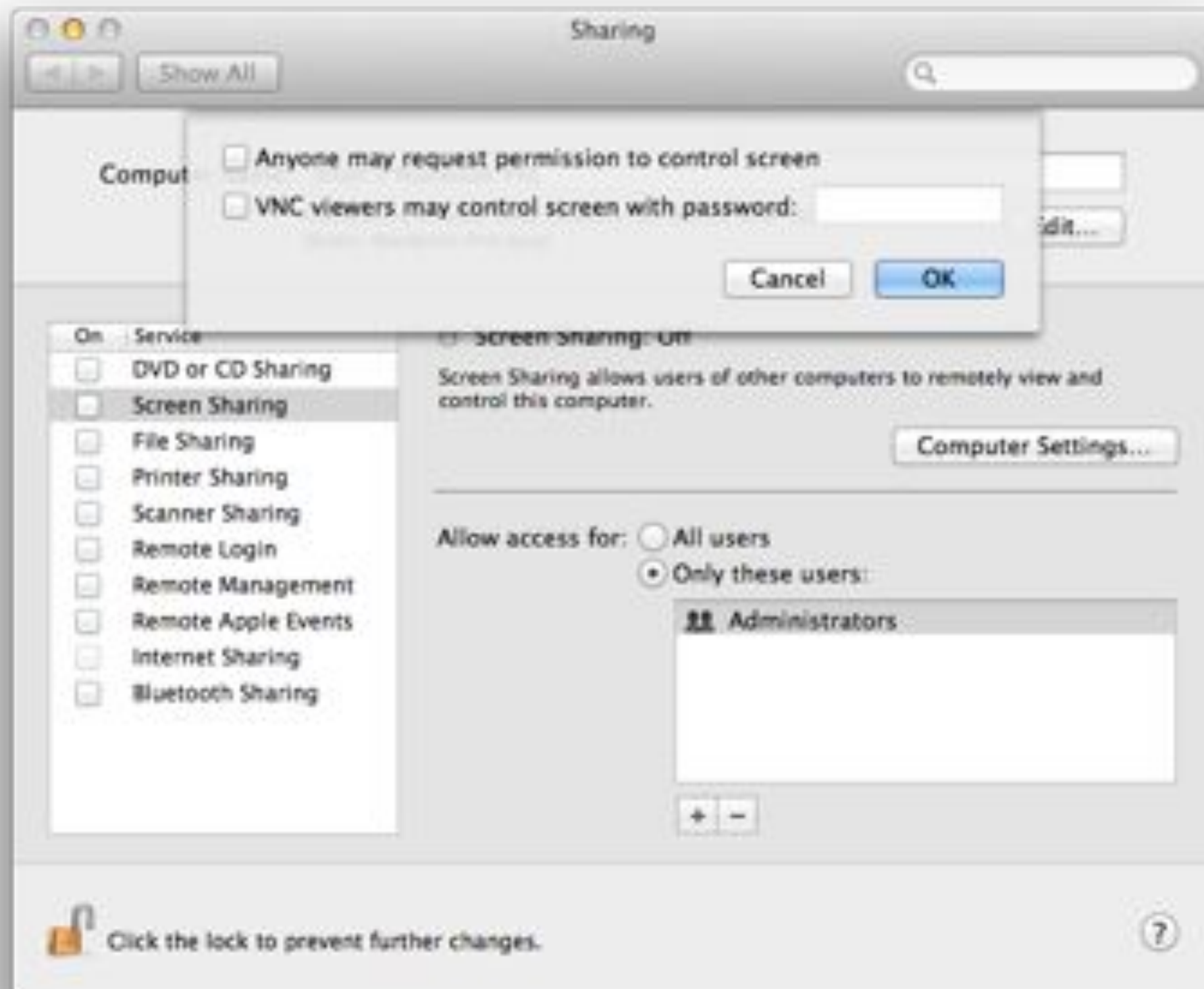
Computer A's shared files appear.



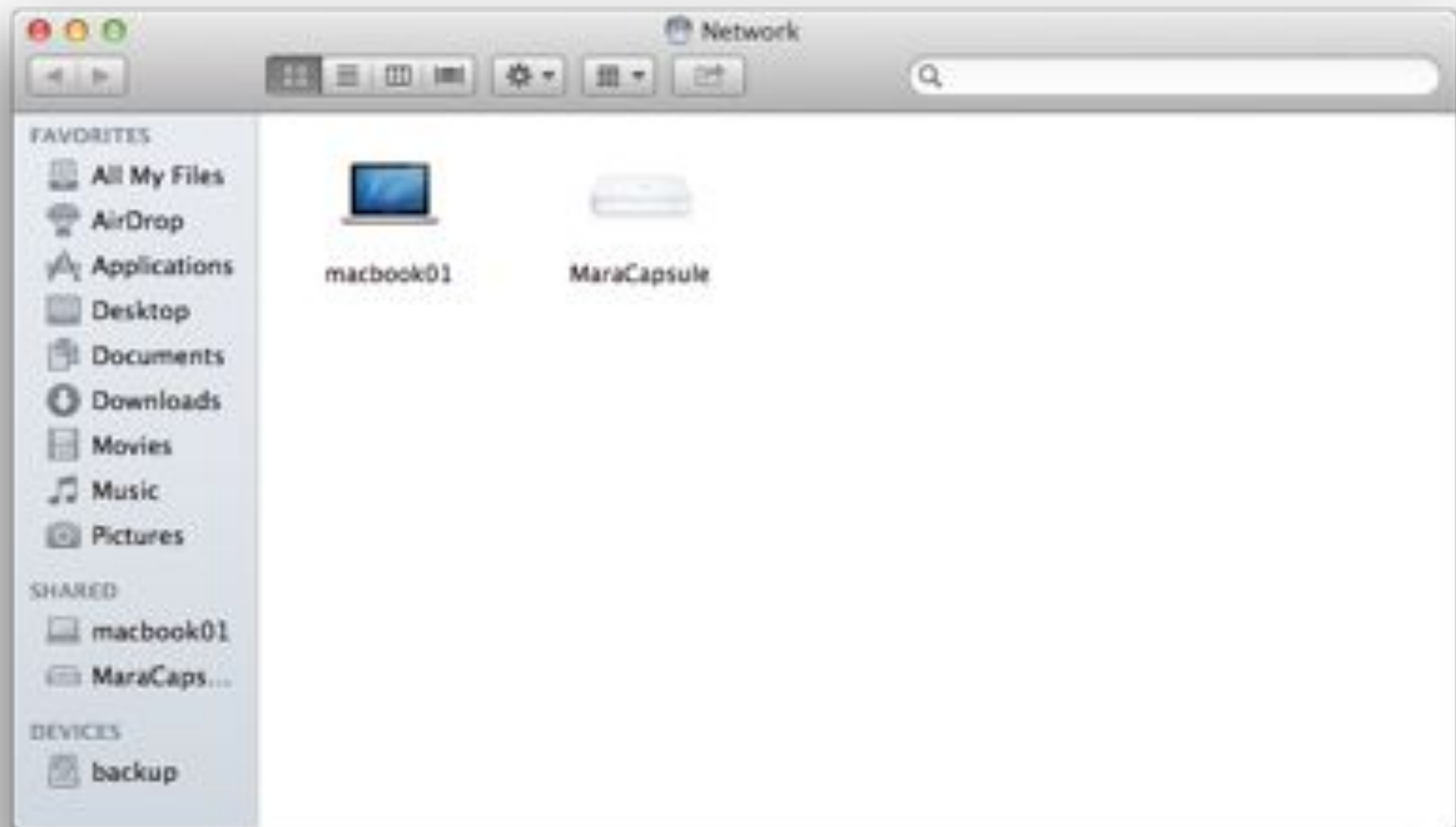
## 7.3 Screen Sharing



On computer A, turn on Screen Sharing. Click the Computer Settings button.



You can set it so anyone can control your screen, and so VNC viewers can control the screen with a password.



On computer B, choose Network from the Finder's go menu. Computer A should be visible. Double-click it.



Click on Share Screen.

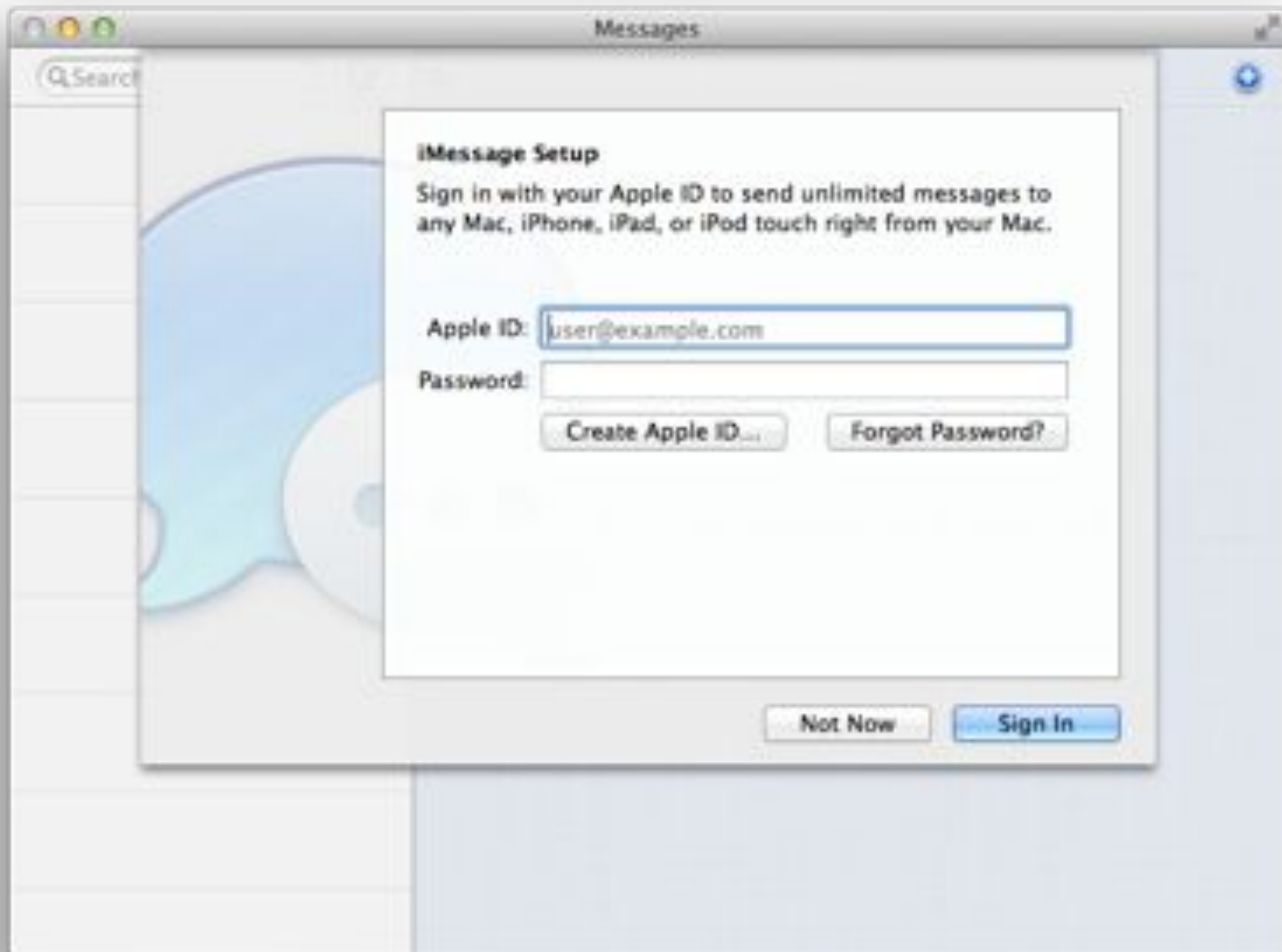


Put in admin's username and password. Click Connect.

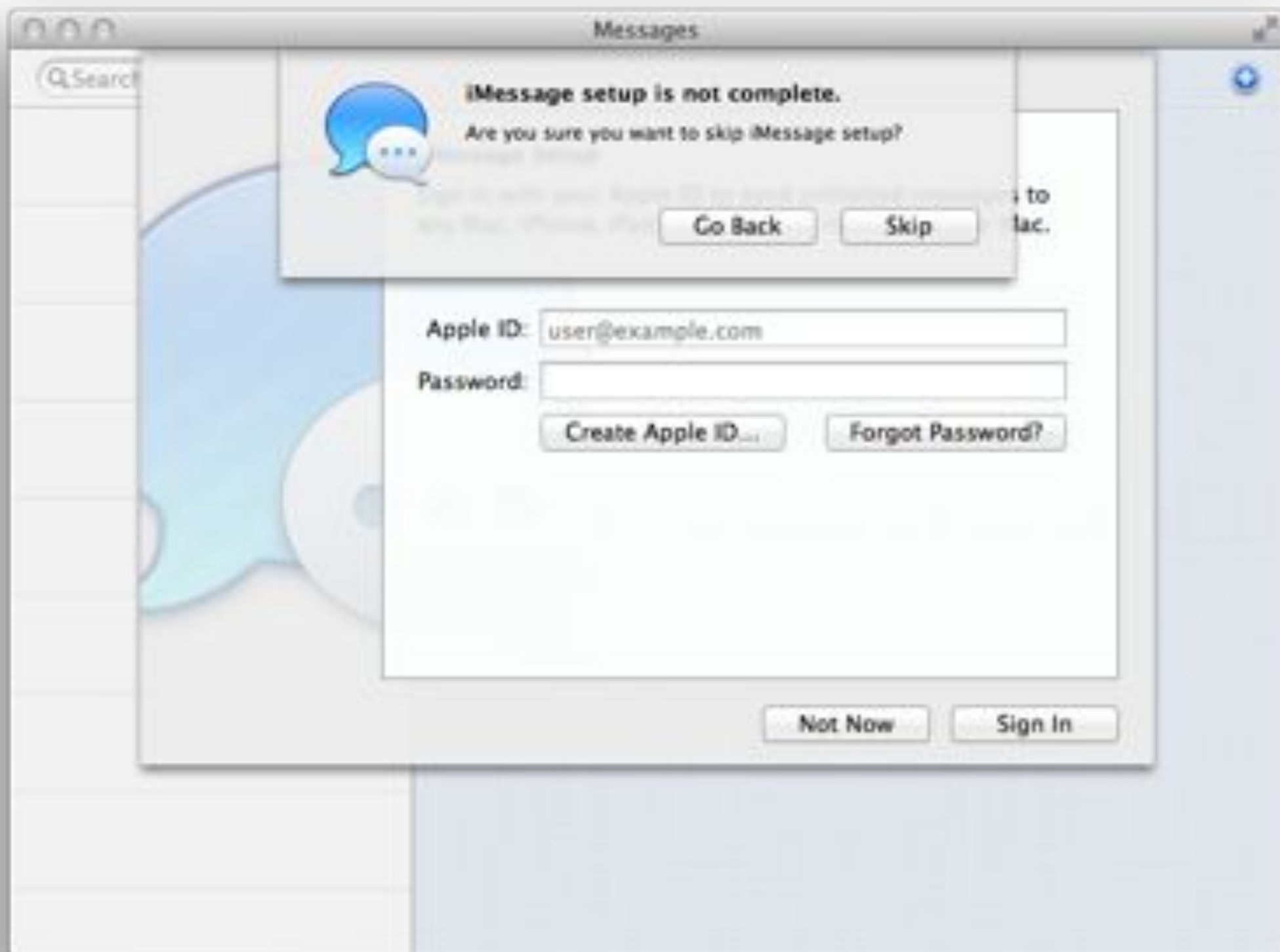




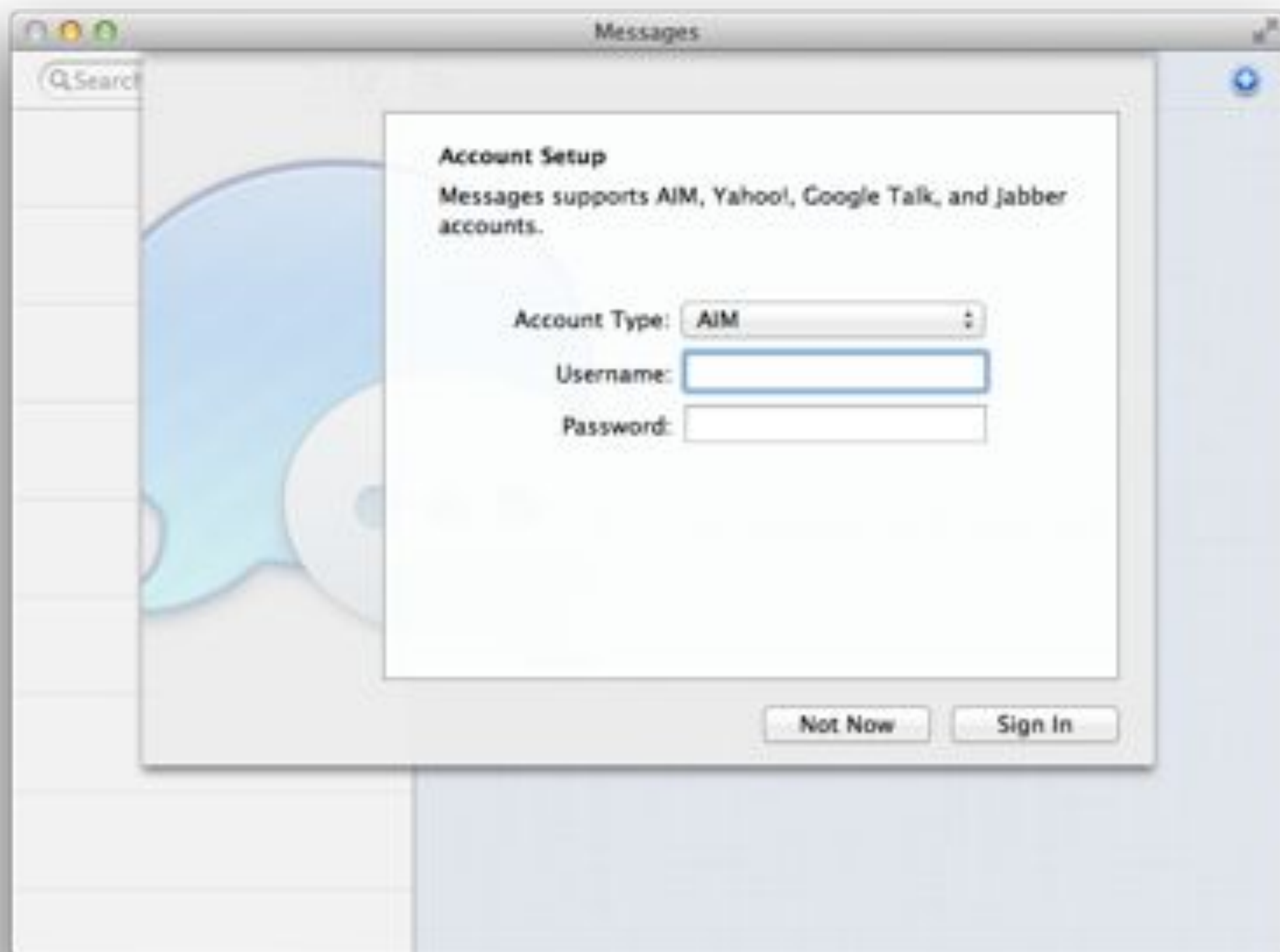
You can see computer A's screen on your screen.



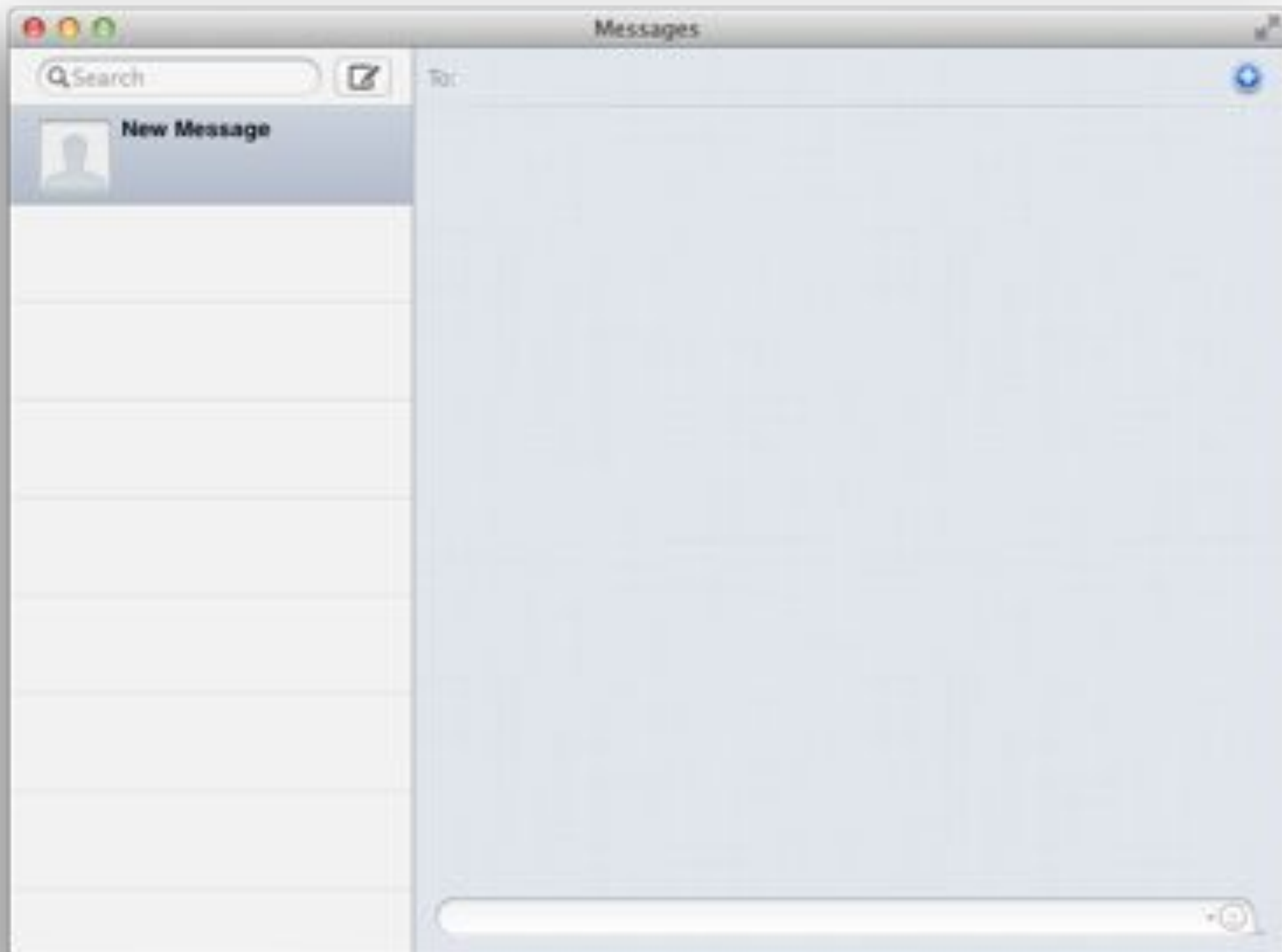
Another way to control a computer over the network is by using Messages. Launch Messages. Click Not Now.



Click Skip.

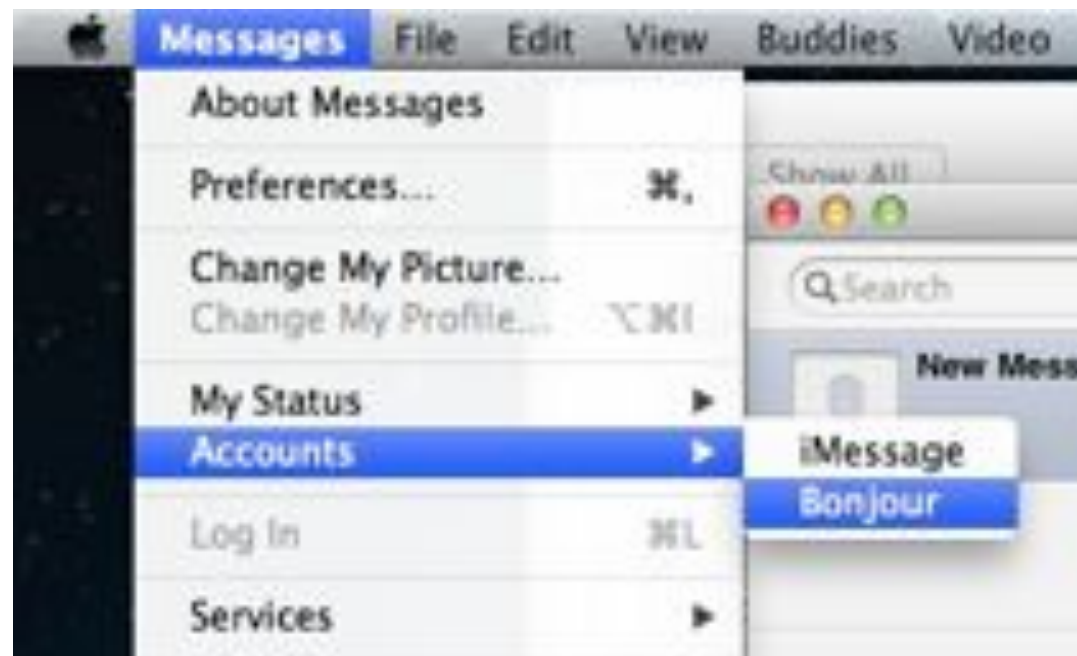


Click Not Now.



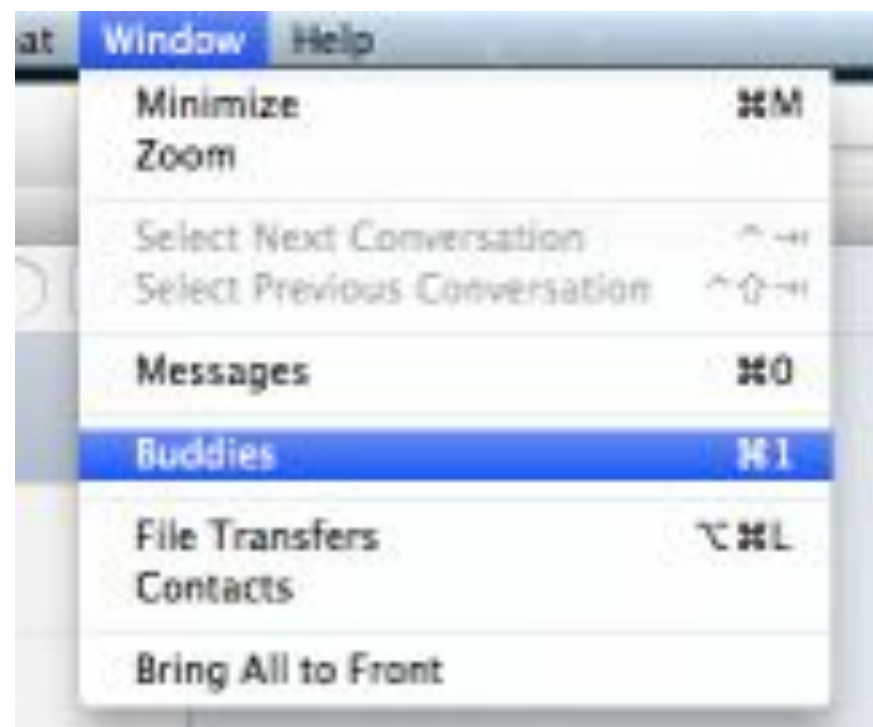
Messages main window appears.



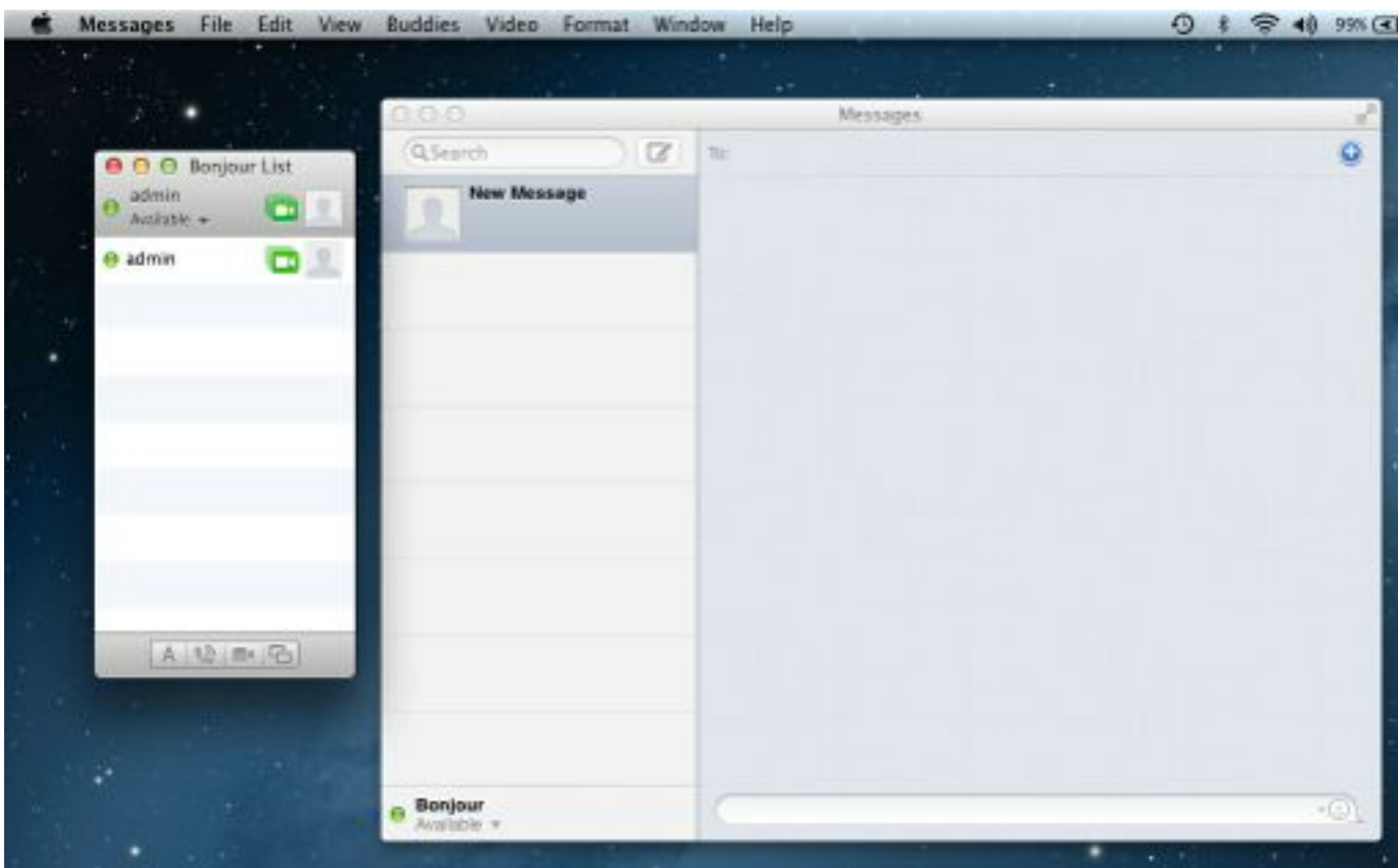


Choose Bonjour from Messages → Accounts menu. This will autodetect computers on the same subnet as you.

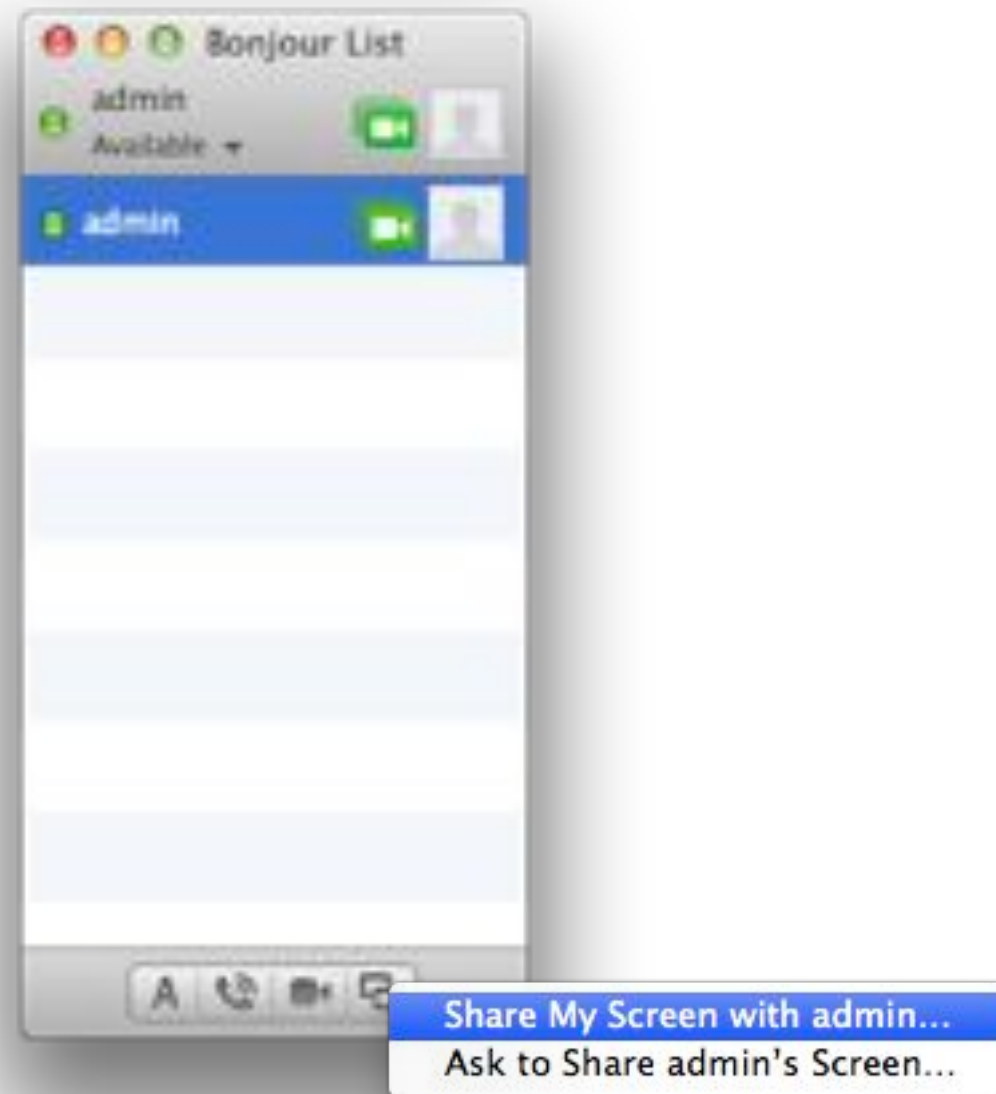




Choose Buddies from the Window menu to display all the computers on the same subnet as you.



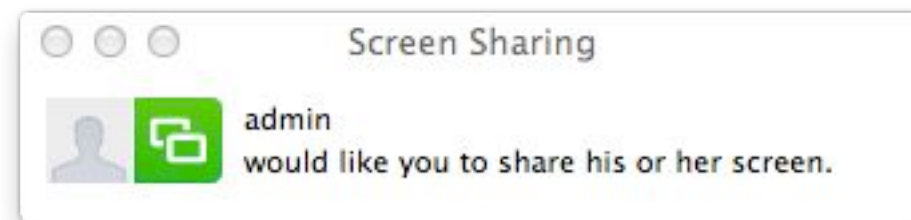
Here you can see a computer B appear on Computer A's buddies list.



You can choose to share your screen, or ask to share Computer B's screen.



You will see this message on your computer.



Computer B will see this message. Click it.



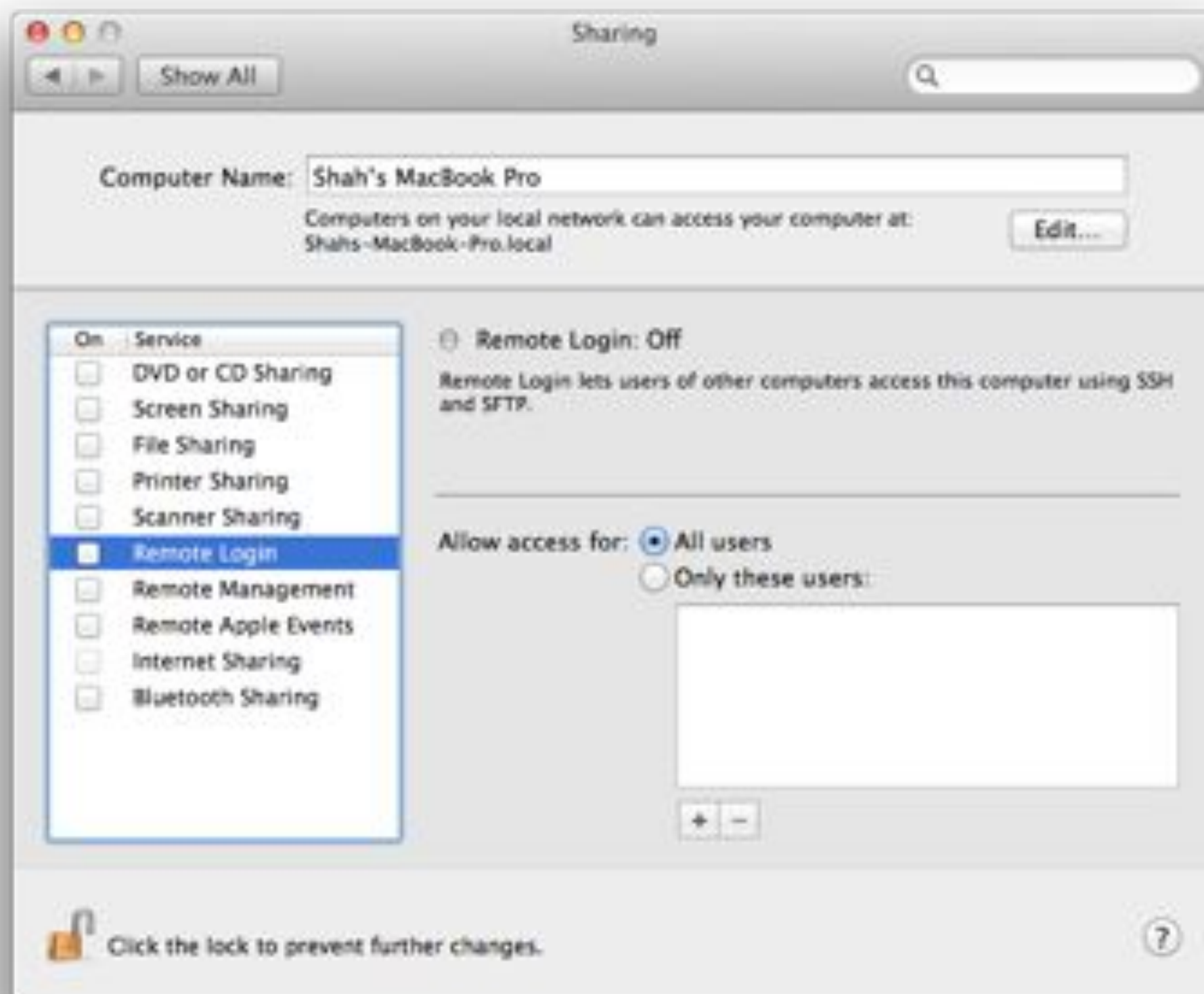
On computer B, click Accept.





Screen sharing starts. If you are asking to share computer B's screen, your own screen will appear on the lower right hand corner.

# 7.5 Remote Login



Turn on Remote Login on Computer A.

```
admin — bash — 80x24
Last login: Mon Nov 12 23:47:59 on console
macbookpro01:~ admin$ sudo re /var/d
Last login: Tue Nov 13 22:03:57 on console
Shahs-MacBook-Pro:~ admin$ ssh admin@macbook01.local
The authenticity of host 'macbook01.local (192.168.1.11)' can't be established.
RSA key fingerprint is fe:b9:b0:75:ae:56:51:0a:ad:cb:71:63:32:71:23:46.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'macbook01.local,192.168.1.11' (RSA) to the list of k
nown hosts.
Password:
Last login: Tue Nov 13 22:06:20 2012
macbook01:~ admin$ open http://www.apple.com
macbook01:~ admin$ open /Applications/TextEdit.app
macbook01:~ admin$ say hello
macbook01:~ admin$ exit
logout
Connection to macbook01.local closed.
Shahs-MacBook-Pro:~ admin$
```

On Computer B, type in the commands as shown.





Computer A responds to Computer B's commands.

# 7.5 Firewall





To protect your computer from attacks over the network, you can turn on your firewall.



Click the lock and enter the admin username and password. Click Advanced.

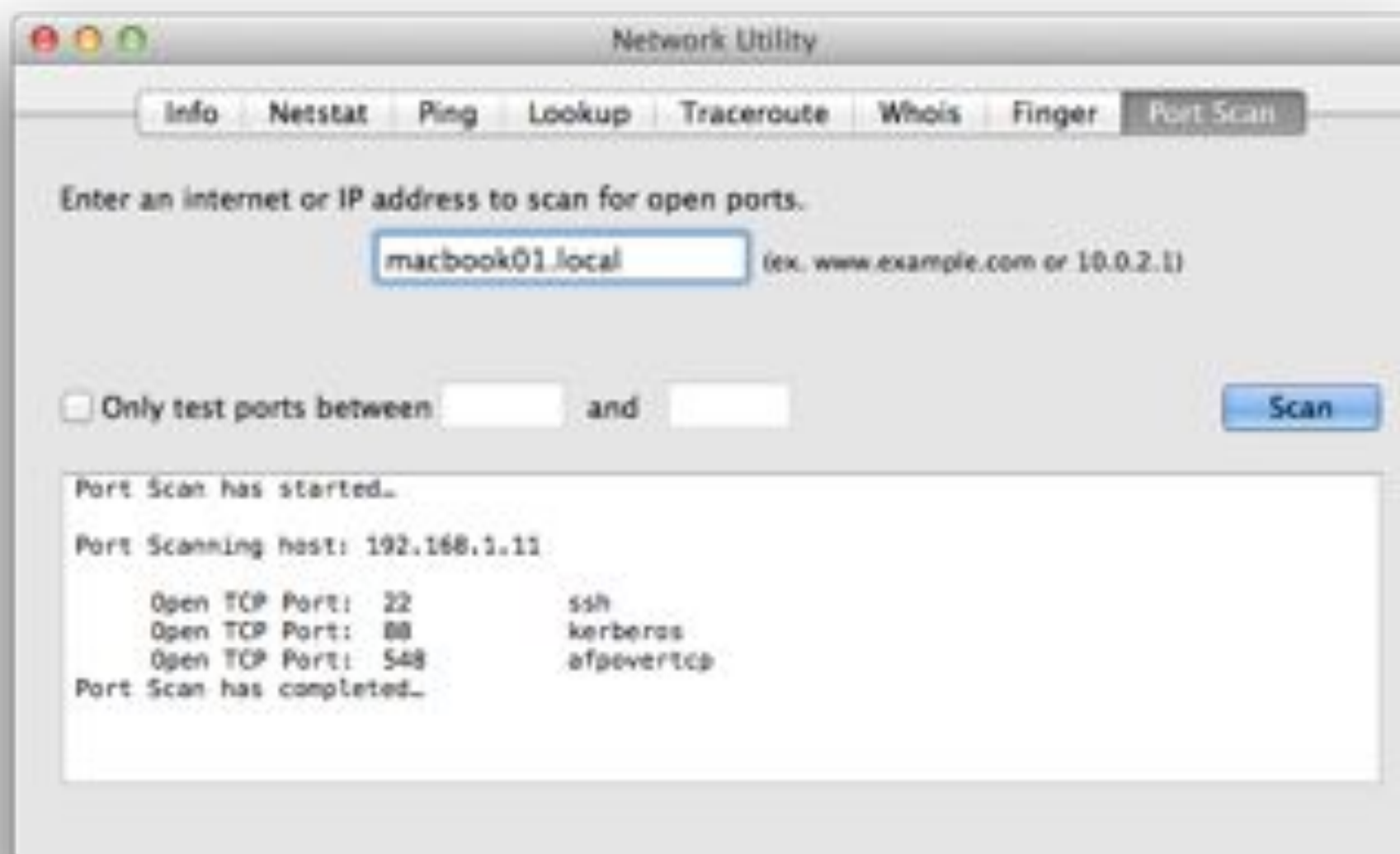


Here you can see the advanced settings.

## 7.6 Port scanning



You can check which ports are open on a computer by using Network Utility Port Scan. On computer B, enter Computer A's address.

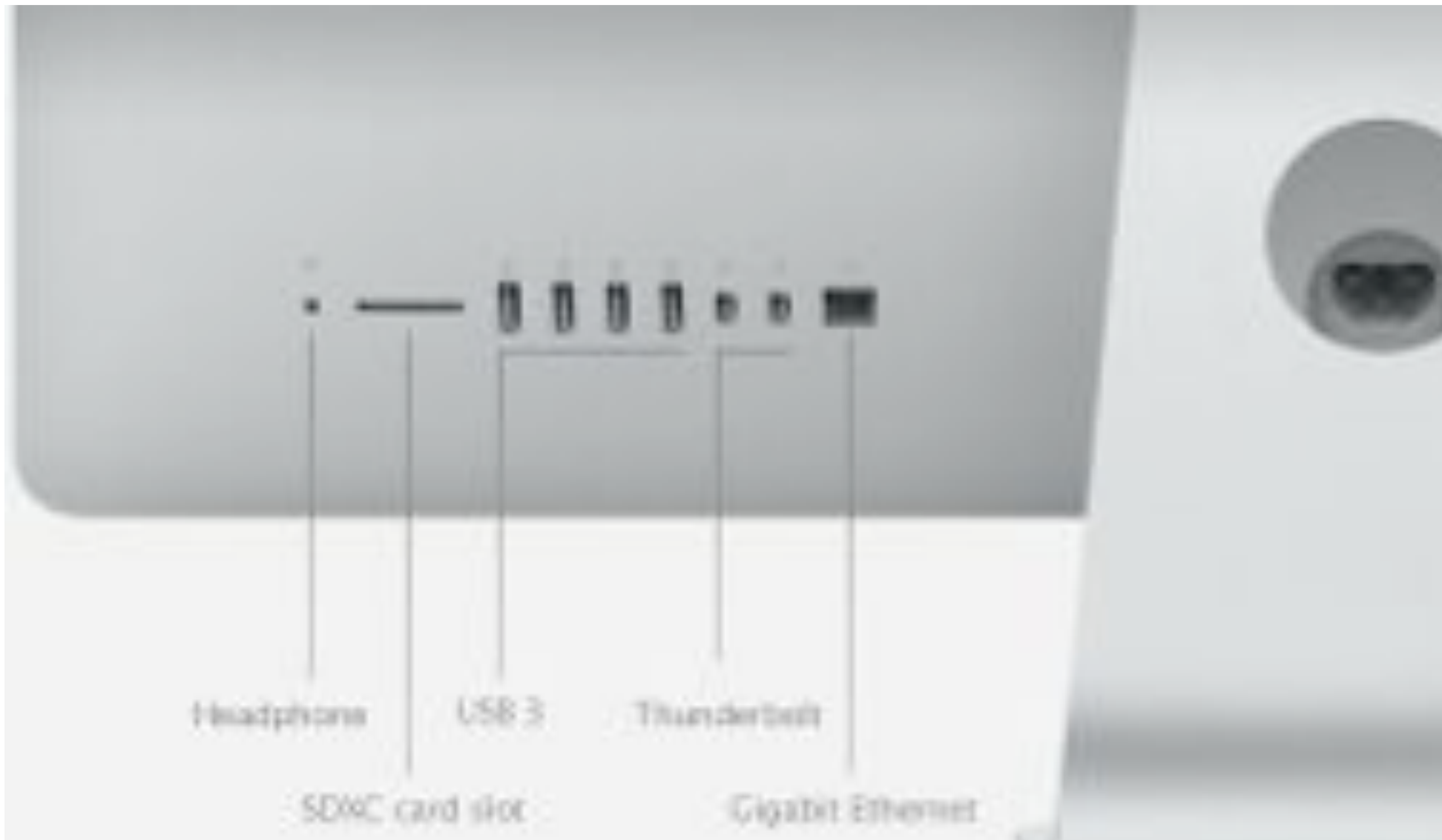


You can see which ports are open.



# 8. Peripherals & Printing

# 8.1 Buses



USB3 – USB peripherals such as mouse, keyboard, thumbdrive

Bluetooth – Wireless devices

Thunderbolt – High speed peripherals, Target disk mode

# 8.2 Classes



HID – Human Input devices such as mouse and keyboard  
Storage – thumbdrives and hard disks

# 8.3 Driver

- Extensions
- Plugins
- Applications

Extensions – /System/Library/Extensions and /Library/Extensions

Plugins – for scanners and cameras

Applications – iTunes is the driver for iOS devices

## 8.4 System Information



Choose About This Mac from the Apple menu

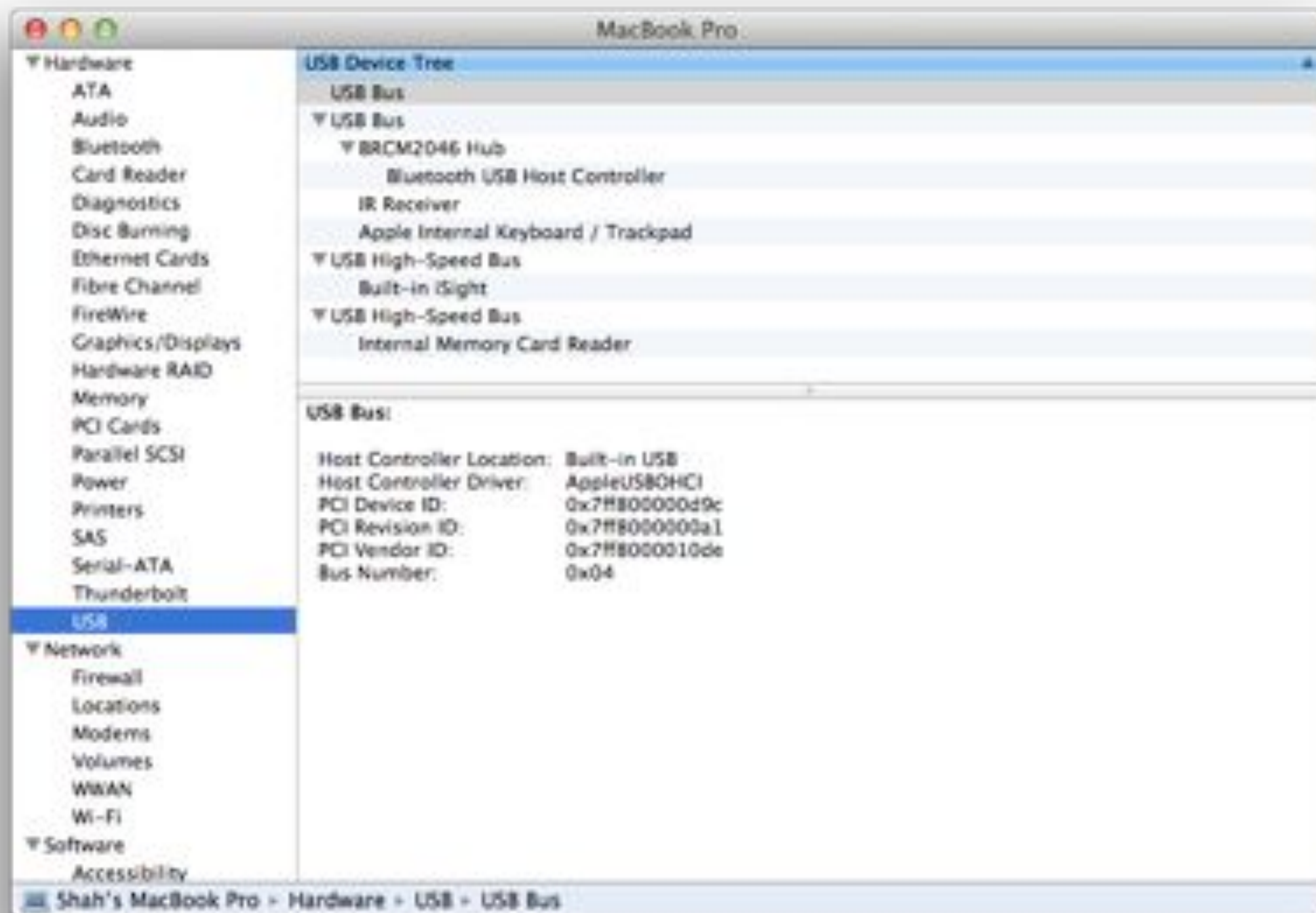




Click More Info...



Click System Report...



Here is all the hardware information.

# 8.5 Troubleshooting

- Check System Information
- Check for updated drivers
- Check physical device

## 8.5 Printing

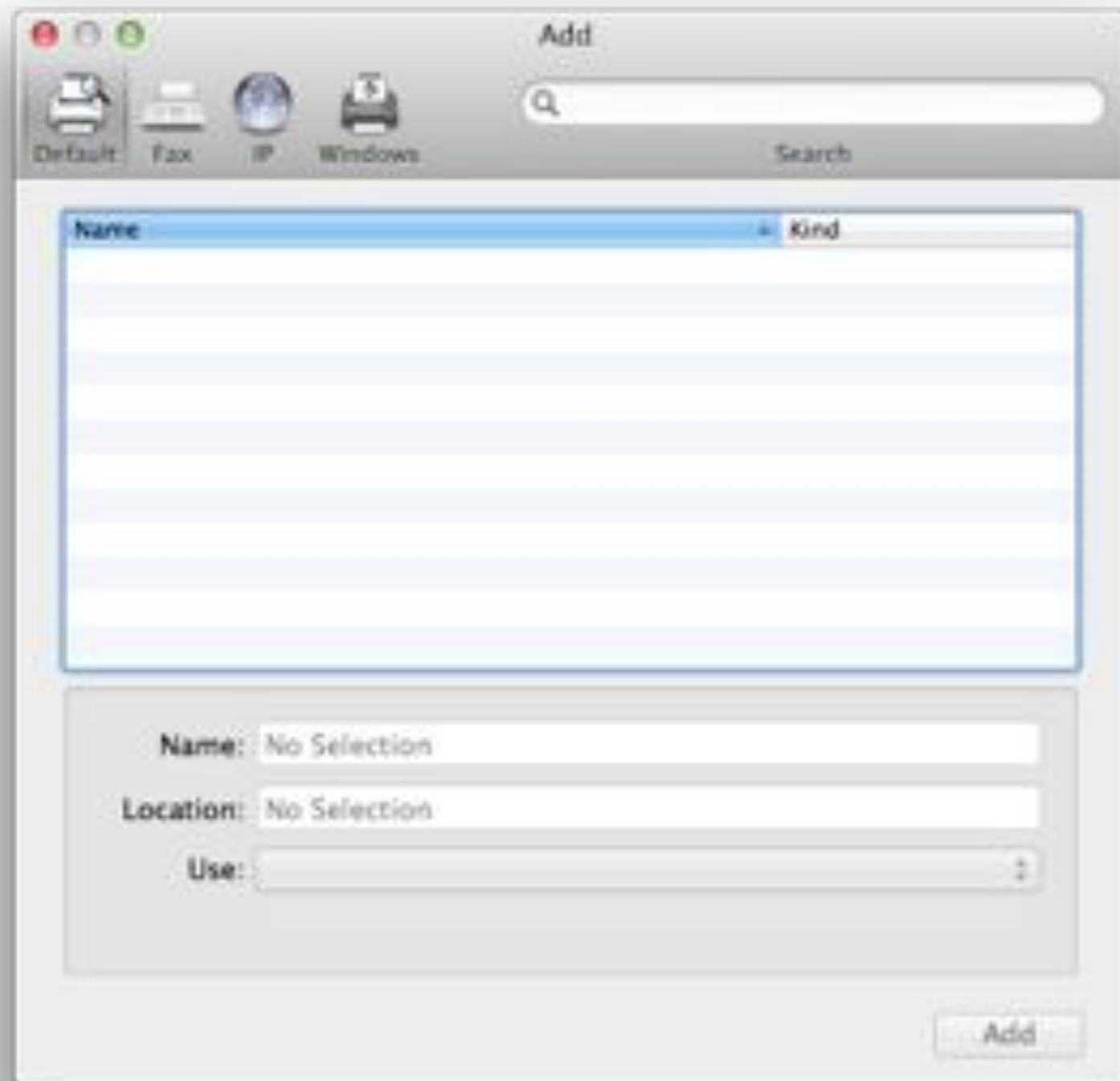


Open System Preferences.





Click on the + sign.



Any USB printers directly connected to the Mac, and any printers using Bonjour can be seen here.

The image shows a macOS 'Add' printer window. At the top, there are four tabs: 'Default', 'Fax', 'IP', and 'Windows'. The 'IP' tab is selected. Below the tabs is a search bar. The main area contains two sections. The first section has three fields: 'Address' with the value '10.10.10.10' and a note 'Valid and complete address.', 'Protocol' with a dropdown menu showing 'Line Printer Daemon - LPD', and 'Queue' which is empty with a note 'Leave blank for default queue.'. The second section has three fields: 'Name' with the value '10.10.10.10', 'Location' with the value 'Test Location', and 'Use' with a dropdown menu showing 'Generic PCL Printer'. Below the 'Use' dropdown is a warning message: 'The selected printer software isn't from the manufacturer and may not let you use all the features of your printer.'. At the bottom right is an 'Add' button.

**Add**

Default Fax IP Windows Search

Address: 10.10.10.10  
Valid and complete address.

Protocol: Line Printer Daemon - LPD

Queue:   
Leave blank for default queue.

Name: 10.10.10.10

Location: Test Location

Use: Generic PCL Printer  
The selected printer software isn't from the manufacturer and may not let you use all the features of your printer.

Add

You can also add Local Network Printer by manually putting in the information. Use the PCL driver if no native driver is detected.



Click Skip.

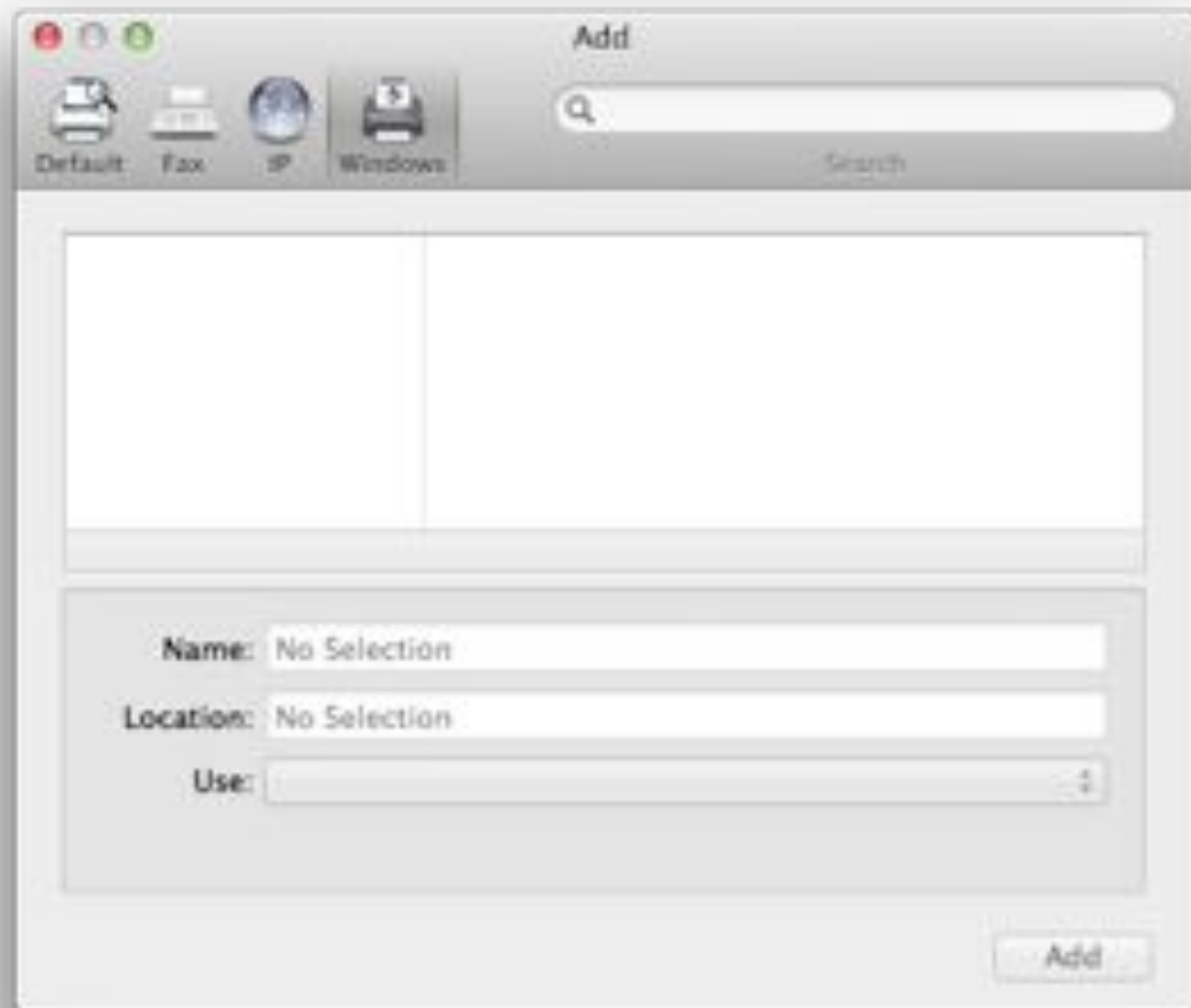


Click OK.

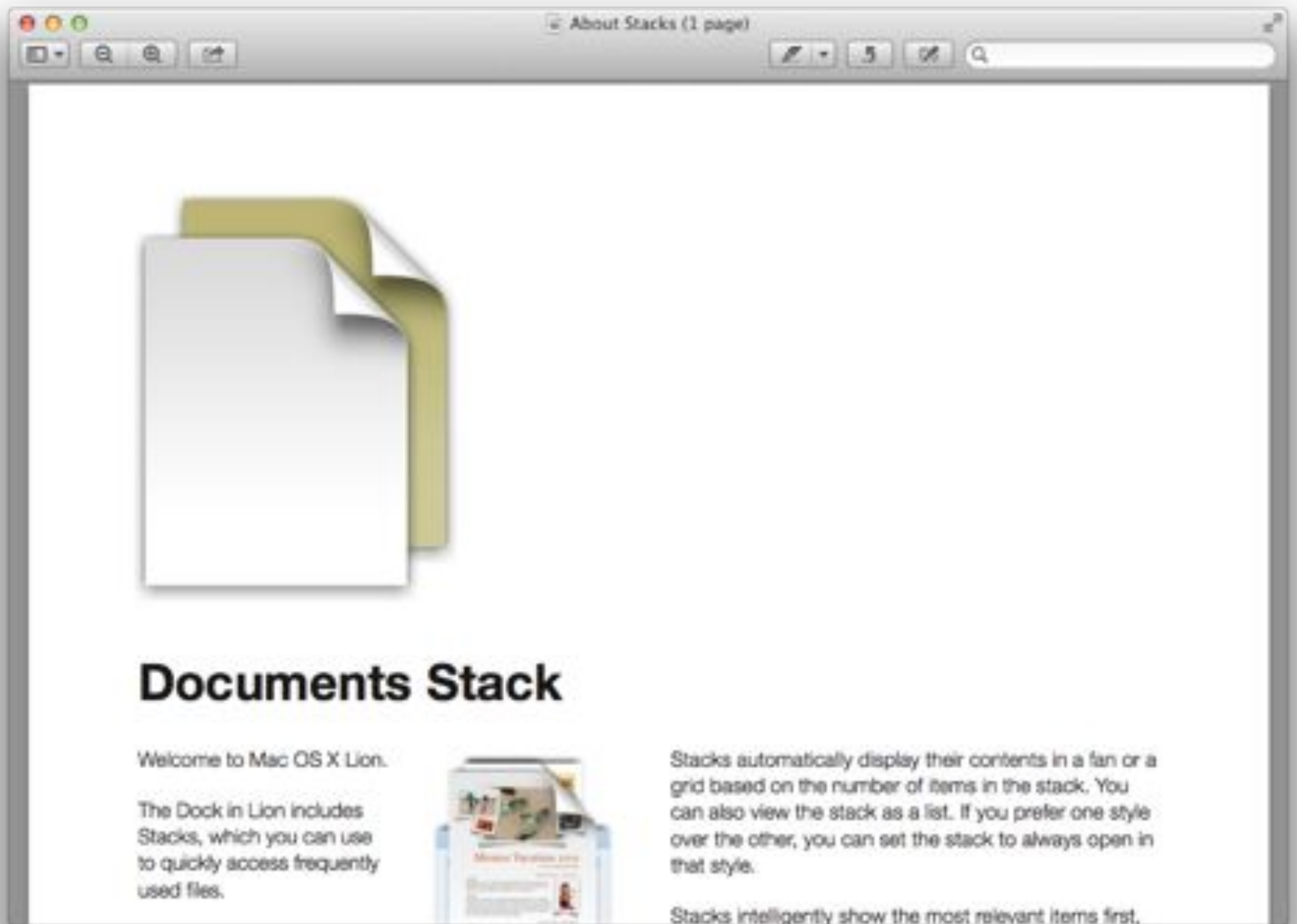


Your printer has been setup. Click Open Print Queue to see print jobs. Click Options & Supplies to change driver, set printer information and to check supply levels.





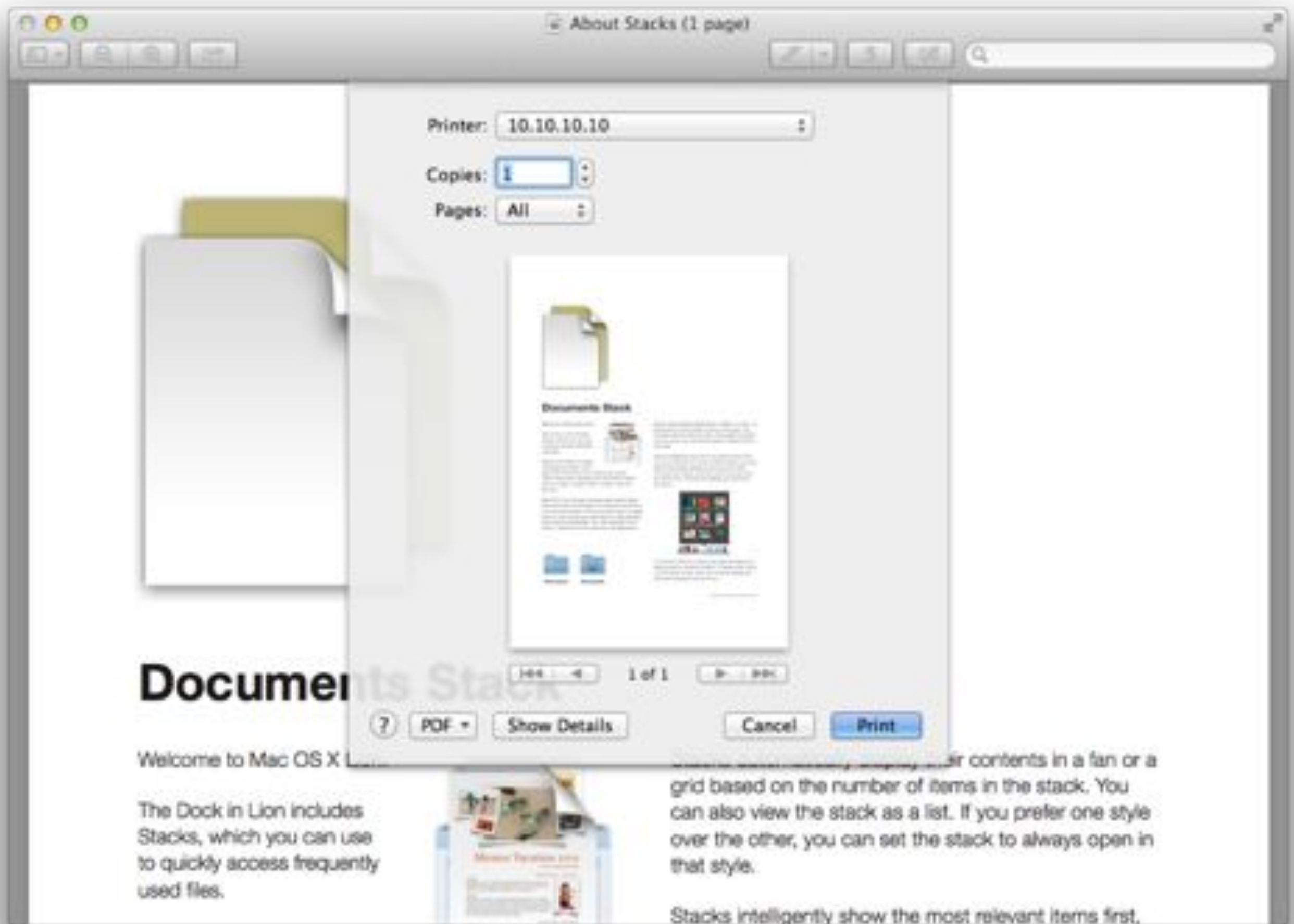
If you have a printer shared by a Windows computer you can connect to it here.



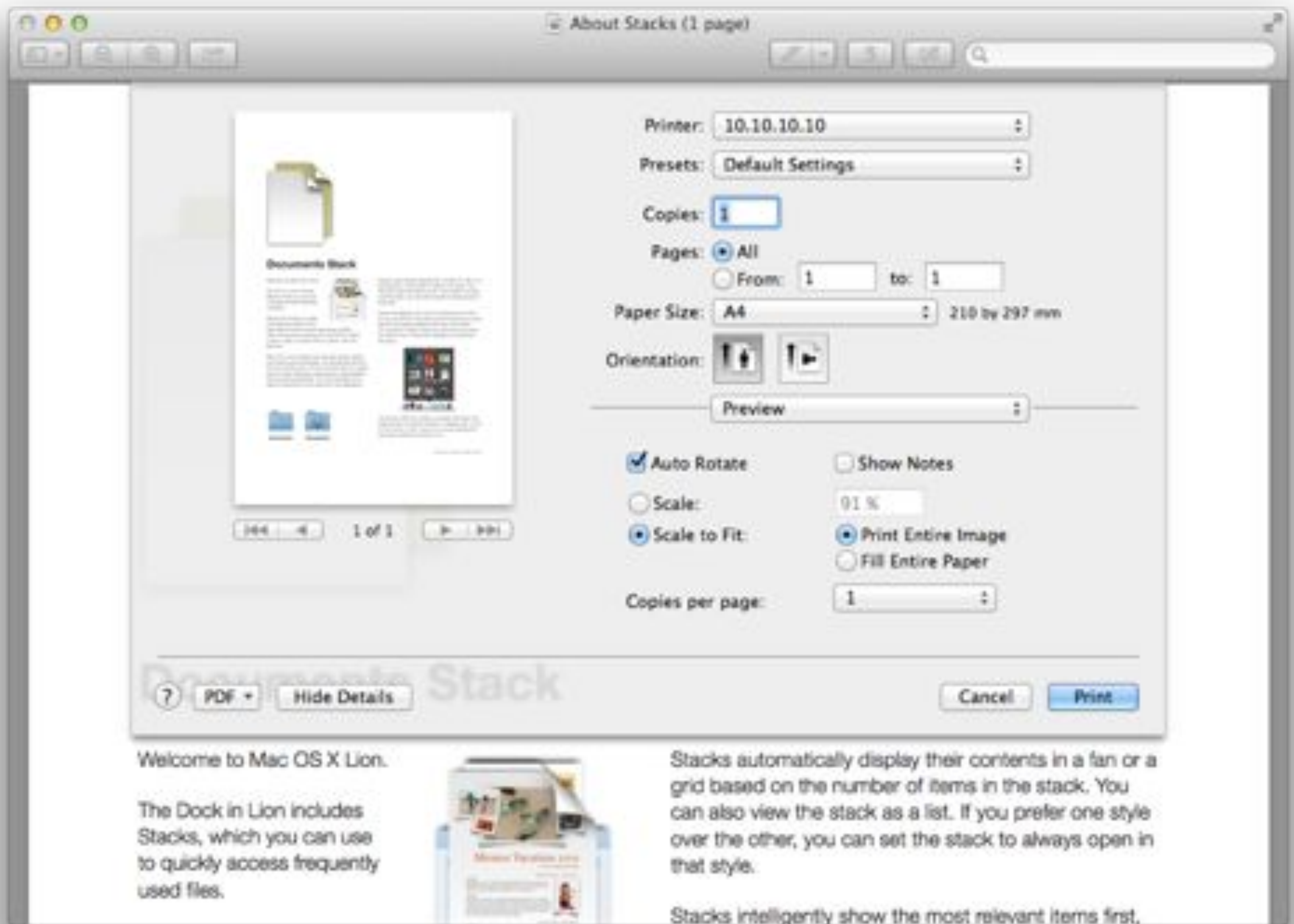
Open a document to be printed, for example, the About Stacks file in the Documents folder in your home directory.



Choose Print from the File menu.



Click on Show Details.

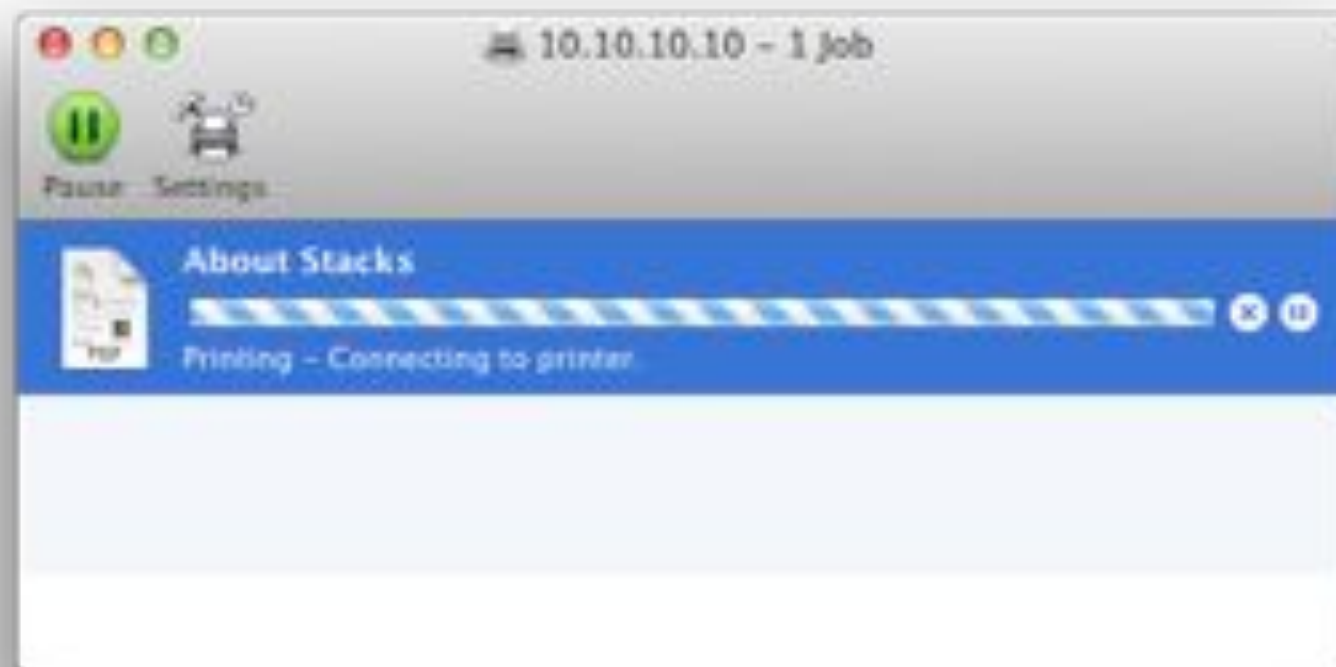


You can change your print settings here before you start printing. Click Print.

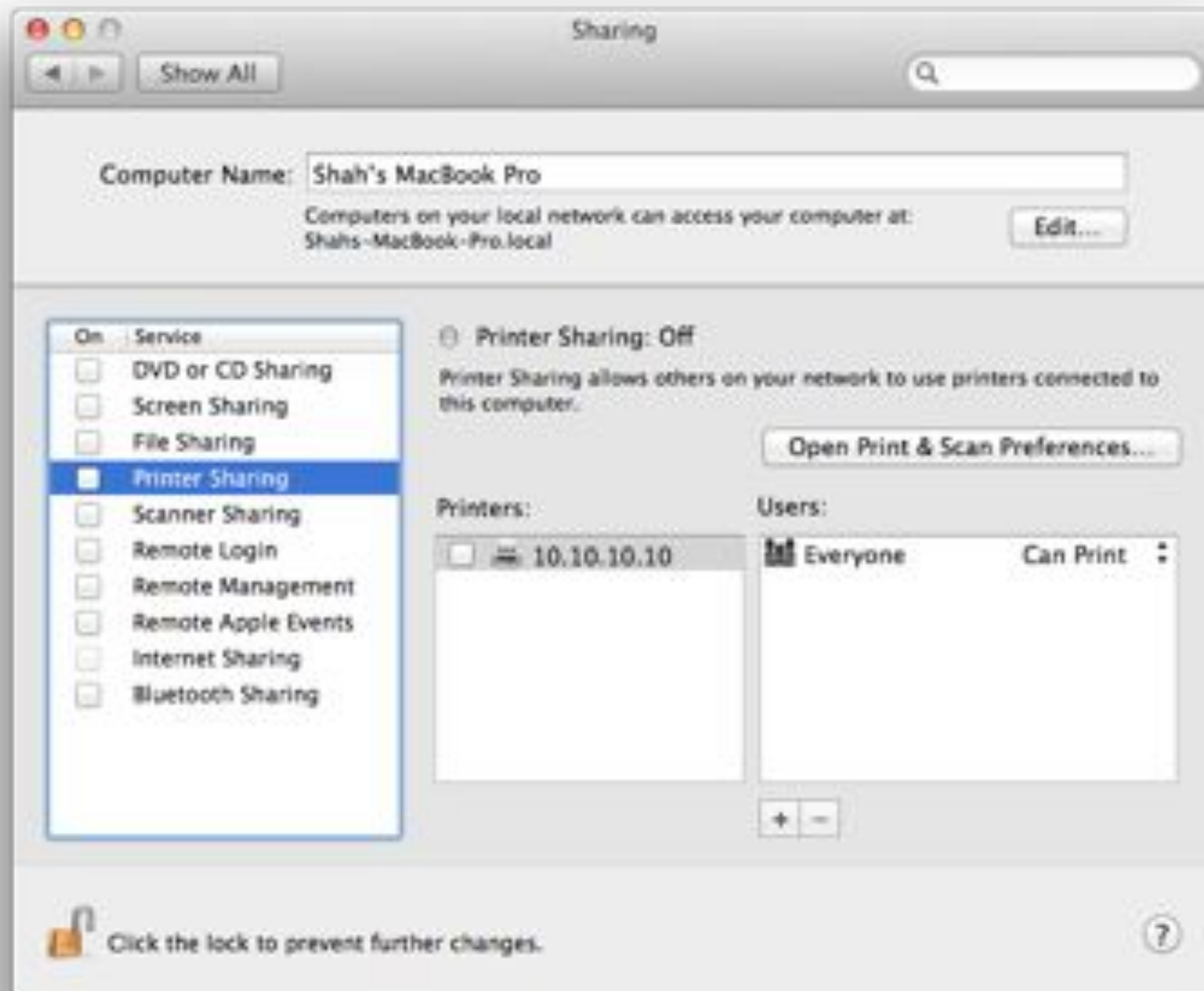


Print queue appears in the Dock.

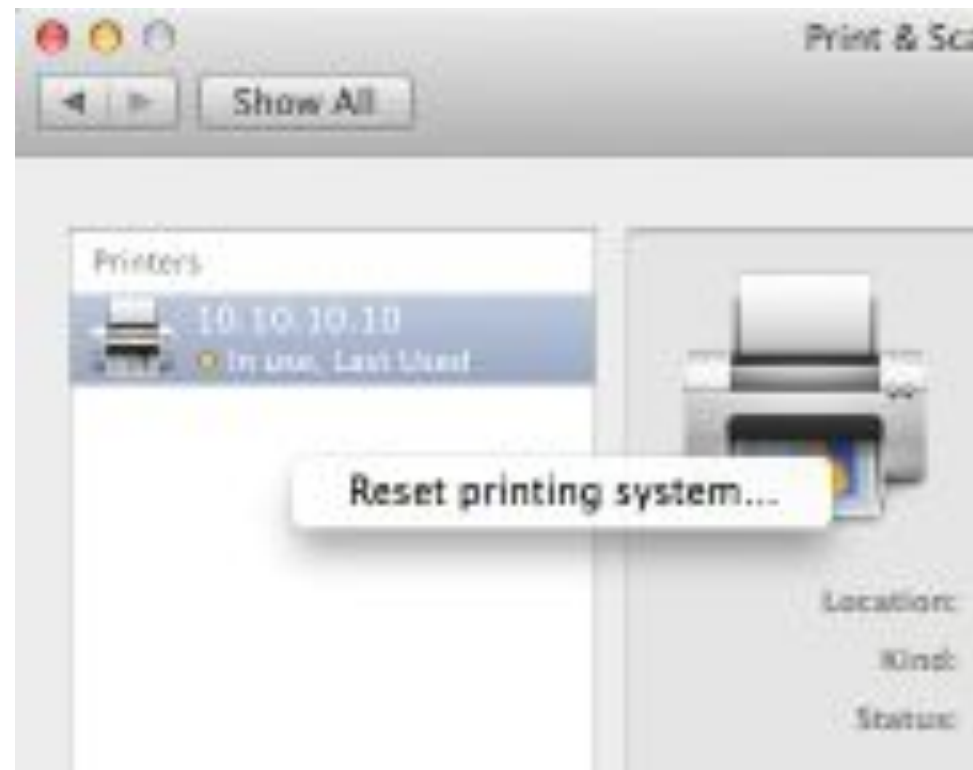




Here we see the current print job. Click x to cancel.



You can share a printer to other Macs using the Sharing system preference.



You can right-click in the printer window to reset the printing system to factory defaults.

# 9. Startup Process

# Stages

- Firmware
- Booter
- Kernel
- System launchd
- loginwindow
- User launchd

Firmware – you hear a chime, hardware test done

Booter – gray Apple logo, loads kernel

Kernel – rotating gear wheel, loads iokit and extensions

System launchd – starts launchdemons and loginwindow

loginwindow – user authentication

User launchd – starts launchagents

# Modifiers

- Option
- T
- Shift (safe mode)
- Command-S (single user mode)

Option – choose which disk to start up from

T – target disk mode

Shift – special mode that loads minimum set of extensions

Command-S – low level mode, user is root



# Safe mode

- fsck
- /System/Library/Extensions
- /System Library/LaunchDemons
- Automatic login disabled
- /System/Library/LaunchAgents
- login items disabled

What safe mode does

10. Hardware  
(refer to the user  
manual)